OCT 30 1944

TELEPHONE ENGINEER and Management

THE NATIONAL TELEPHONE MAGAZINE

OCTOBER, 1944

featuring -

U.S.I.T.A. CONVENTION REPORT
Page 38

EDITORIAL INDEX—Page 12

THE COVER PICTURE

Mr. John P. Boylan, president of the Rochester Telephone Corporation, Rochester, New York, was elected president of the United States Independent Telephone Association at its annual convention last week.

Announcing--

"WHAT HAS THE WAR TAUGHT US", an article by John P. Boylan, written for the exclusive use of this magazine will appear in the November 15 issue —Watch for it.

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As you will notice we are devoting this entire issue to the proceedings of the National Convention of the United States Independent Telephone Association. We are reproducing as many of the important papers as we can and feel that each of these will find material of interest to you. We delayed publishing on our usual date of the 15th to bring you the complete details of the convention and our convention pictures. The writer doubled as photographer.

▲

It was nice to see so many of the old-timers at the convention. The Pioneer Association Convention was packed. There was Harry MacMeal and Hube Hubenthal, both old timers still active in their life's work. Bill Melchers was there enjoying hearty laughter. J. K. Johnston was happy and contented over the record of his beloved Pioneers. We enjoyed seeing all of them. We hope you enjoy our record of the meeting.

▲

For this one issue we omitted several of our regular features. The Observation Tower, the Short Course and our Line & Desk departments will again appear in our November issue. We will also have in that issue another "exclusive TELEPHONE ENGINEER feature"—an article authored exclusively for our readers by the new USITA president John P. Boylan.

R.W.S.

TELEPHONE ENGINEER AND MANAGEMENT

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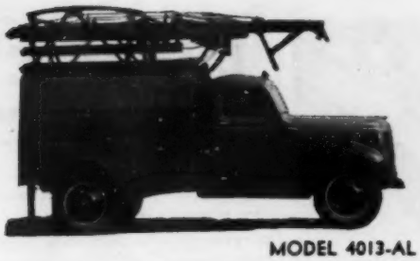

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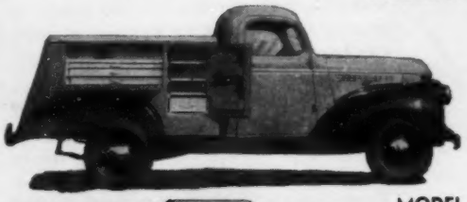

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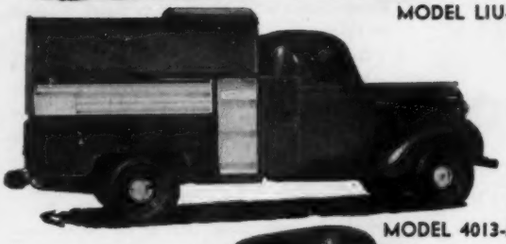

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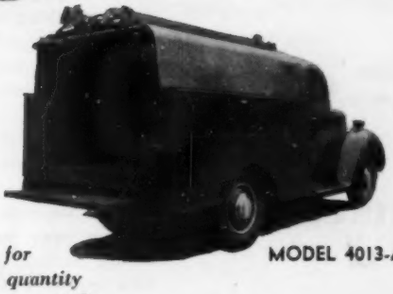

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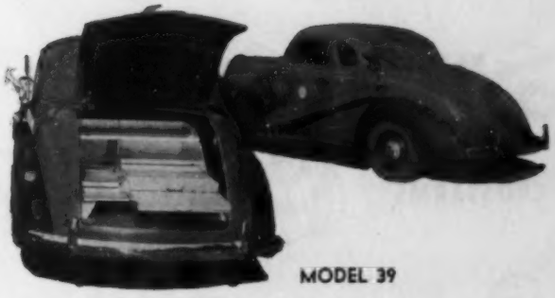

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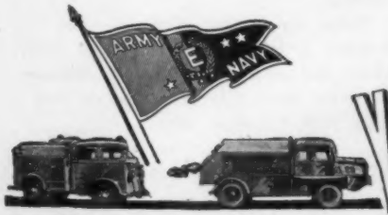

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LETTERS

from TELEPHONE ENGINEER readers

Dear Mr. Smith.

There are many small exchanges having a small amount of cable and no employee who understands much about the maintenance of it. As long as it works they seem to think that is all that is necessary.

Much of this cable has been in use for many years with little or no attention and more or less trouble is sure to develop in some of it before another winter is over.

If the cable is buried there is little can be done about inspecting it except that which is above ground, but this should be inspected to see that no mechanical injury can happen such as trucks backing into it, etc.

Old aerial cable is subject to many troubles such as ring cuts, usually near poles. This is very common and can be avoided by simply moving the rings or using insulated wire next to poles, instead of rings.

Cable that is too slack is much more subject to vibration trouble than if it were tighter; tree limbs rubbing on the cable cause much trouble and should be watched.

A good telephone man will have the habit of casually looking over the cable when on any pole and if he notes anything doubtful will remedy it at once.

Some maintenance men get careless about leaving carbons out at cable terminals which is fairly sure to cause lightning burns sooner or later, the carbons are really more important than the fuse.

Among the many troubles a cable repair man may find in the course of a year are ring cuts, lightning burns, vibration crystalizing which can hardly be seen, sheath damaged by tree limbs, bullet holes, cable sagging down on electric wires and burning holes, this in aerial cable.

Buried cable is subject to other troubles such as gophers eating thru the sheath, men digging for water pipes or setting poles or anchors, electrolysis where cable has not been protected by compound or armor, cutting of cable at ground line with scythe, water getting into pipes that have been used to protect the cable, and freezing.

These are a few of the troubles that happen to telephone cable which should show that regular inspection is necessary to avoid trouble, and if you do find a hole, tape it over at once.

Geo. A. Brishton
Cedar Rapids, Iowa

(Editors Note: We thank Mr. Bishton for this worthwhile letter. Many of you have good suggestions and the industry would like to read them. Let us hear from YOU.)

EDITORIAL

Here's a Job for All of Us!

IN our opinion the most important and urgent single issue discussed at the national convention just held was the problem of farm telephone service.

This is not a problem of small telephone companies only. A number of the large Class A and B Independent companies— particularly those located in the Middle West—operate many exchanges in agricultural areas; the farm telephone situation is very important to them. It is also a problem of the Bell System, as was evidenced by the following reference to it in Mr. Walter S. Gifford's address to the convention. Mr. Gifford said:

> "There is one group of telephone users, however, that it is difficult to furnish with telephone service at a price that the customer feels he can pay. I refer to rural telephone service. Here we have great distances to be covered with few customers. Not only the construction required but the maintenance of equipment makes it difficult always to bring the cost down so that the farmer, unless he is a fairly prosperous one, will cheerfully pay the price. Too many of them decide to do without the service. I say this in spite of the fact that rural telephone service is undoubtedly more highly developed in this country than anywhere else in the world. The point is that it is not developed as far as we in the industry would like to have it. As a post-war objective, I suggest that the entire industry unite on the problem of finding ways and means to furnish satisfactory telephone service for the farmer at a cost that more of them can afford. Fortunately, there are developments in sight that make it look as if this could be done."

The problem has not gone without recognition by the Independents. Both the Plant and Commercial Committees gave the question consideration on their conference programs, and the Committee on Postwar Plans and War Activities, after discussion of it in its report, said the following:

> "In the Committee's opinion this matter is one of great importance to the entire telephone industry, and one which deserves and requires persistent and concentrated effort by telephone companies and by the national and state associations. The Committee recommends that the proposition be given a high priority in the Association's activities, and suggests consideration of the creation of a special committee, which special committee could give its entire attention to the important question."

Such a committee was authorized and will, we understand, be appointed and begin to function soon.

There is no need to recount here the possibility that unless the telephone industry itself finds the answer to this question, somebody else will probably attempt to find it.

That the industry can itself find the answer, we do not doubt for one moment, provided we concentrate on the job.

THIS is a job for "all hands and the cook". Anyone in the industry who has knowledge of the matter and worthwhile ideas and plans for dealing with it, should and no doubt will be welcome to participate in deliberations on it. We think that goes for the TELEPHONE ENGINEER publications, and we propose and intend to be of the greatest service we can to the industry in this cause.

There are two very important elements in this farm telephone situation. One is, of course, the proposition of finding a way to supply wire or other communication facilities for farm telephone service on an economic basis. We must be able to do that before we can get far with the proposition at all.

The other element is something else again—it is the attitude of the farmer himself toward telephone service. It is, to put it baldly, the question of whether or not most farmers want telephones.

There is some evidence that perhaps some farmers do not consider the telephone as important to them in these days as it was in former years. As an example: Thousands of farm telephones that were removed during the depression have never been regained. It seems very likely that many farmers are doing without telephone service simply because they feel that they do not need it.

Our feeling is that, in order to solve this problem, we have not only a technical job to do—we have also a selling job to do.

But, whatever the jobs are, we know they can be done if we all get at it. This is to announce that TELEPHONE ENGINEER AND MANAGEMENT and FORTNIGHTLY TELEPHONE ENGINEER are already at it. In our forthcoming issues we will have more to say on the subject.

USITA Registration Desk. Discernible are Frank LaPrade, Virginia; A. N. Seward, Tallahassee, and I. J. Devor, Lincoln.

Registration scene at the desk of the Independent Pioneer Telephone Association. J. K. Johnston, the Pioneer "daddy" at center.

Boylan Named President Of USITA at Convention

By RAY W. SMITH, Editor

CONCLUDING what many stated was the most successful convention in its history, the United States Independent Telephone Association adjourned their three-day Convention October 12 with a keynote on future planning and postwar problems. Over 1300 executives of Independent telephone properties all over the United States were in attendance.

John P. Boylan, president of the Rochester (N. Y.) Telephone Corp., was elected president, succeeding Charles F. Mason, president of Associated Telephone Co., Ltd., Santa Monica, Cal. R. A. Lumpkin of Mattoon, Ill., and Col. W. C. Henry, now with the U. S. Army Signal Corps in Europe, were elected vice presidents. Clyde S. Bailey, the executive vice president, was reelected to continue as executive in charge of national headquarters in Washington, D. C.

C. C. Deering, the perennial secretary-treasurer for the past quarter-century, was not a candidate for reelection and had so notified the USITA at its Spring Conference last April. To succeed him, the Association stepped up the assistant secretary, Floyd D. Ridings to secretary. Carl D. Brorein, president of the Peninsular Telephone Co., Tampa, Florida, was made treasurer.

Elected to the board of directors for a three-year term were J. H. Agee, Lincoln, Nebr.; E. M. Blakeslee, Lafayette, Ind.; R. B. Still, Bloomington, Ill.; T. S. Gary, Chicago; E. Winston Rodormer, Chicago; B. L. Fisher, Martinsville, Va.; A. N. Johns, San Francisco, Cal.; Mr. Lumpkin, Mattoon, Ill.; F. R. McBerty, Galion, Ohio; R. A. Phillips, Sioux Falls, So. Dak.; Kelley McNish, Bristol, Va.-Tenn.; J. R. Porter, Tarboro, N. C.; R. E. Williams, Ft. Wayne, Ind.; and John Wright, Jamestown, N. Y. These directors met with the 24 other members of the board at their meeting during October 12.

Another view of the record breaking registration at USITA convention. Mrs. Margaret Cureton, former USITA assistant at left. Her former boss, Louis Pitcher, at right.

Clyde S. Bailey, Executive Vice Pres.

CONVENTION PICTURES

At the right we are reproducing the first of several strips of pictures taken during the USITA Convention. We are omitting the names —to have more space to bring you the Convention report.

Besides the many Independent industry speakers the convention heard American Tel. and Tel. Co. president Walter S. Gifford, whose address many of you have seen discussed in your daily newspapers.

Our Pre-Convention number of Fortnightly TELEPHONE ENGINEER, which was mailed on October 1, gave details of the program. However, in this issue we will carry as many of the reports and papers as space will allow.

Conferences

THIS writer was particularly impressed by the Division Conferences held during the entire first day of October 10.

The Plant Conference, under the chairmanship of F. E. Norris, vice president of Associated Telephone Co., Ltd., heard four papers presented by outstanding telephone engineers in the industry. We hope to reproduce a number of these papers in this and succeeding issues.

The Commercial Conference, with J. F. O'Connell, president of Commonwealth Telephone Co., Madison, Wis., was held simultaneously with the Plant Conference and heard reports given by R. F. Lucier, president of United Telephone Co., Inc., Warsaw, Indiana; H. F. McCulla, Lincoln Roberts, Jamestown, N. Y.; and Harry (Nebr.) Tel. and Tel. Co.; Leon F. Pike, Madison, Wis.

The Traffic and Accounting Conferences were held during the afternoon. The Traffic meeting, under the chairmanship of W. C. Darrow, commercial manager of Carolina Tel. and Tel Co., presented one of the outstanding features of the entire convention. Their offering consisted of a dramatization of "Traffic Troubles and a Solution," with a cast of seven Independent telephone industry participants. The entire dramatization was presented on a stage erected in the convention hall, with seven scenes included in their program. A short talk following each scene was made by a member of the Traffic committee and each talk had a direct relation to the scene presented. Mr. Darrow and his committee were the recipients of many congratulations for the presentation and for the manner in which it was presented with almost professional inspiration.

The Accounting Conference heard papers presented by R. H. Buckles of Arthur Andersen and Co.; A. G. Kiesling, general auditor of the Commonwealth Telephone Co., and R. D. Heusel, vice president and treasurer of the Associated Public Utilities Corp., Columbus, Ohio.

As mentioned previously, we hope to present as many of these papers as possible in this and in succeeding issues of TELEPHONE ENGINEER. Many of these reports will be found in this issue on succeeding pages.

State Association Luncheon

THE luncheon for the presidents and secretaries of the state telephone associations was held with the USITA Coordinating Committee meeting in charge of G. B. Foscue, chairman. Following the luncheon, the chairman asked Clyde S. Bailey to take charge of the program. After a short statement outlining the plans of the committee, Mr. Bailey called on a number of state association executives to give their views on stated questions. Heard were H. M. Stewart, Indiana; retiring president Mason, California; F. V. Rhodes, California; W. H. Beck, Indiana; J. M. Byrne, Wisconsin, and several other prominent association executives.

General Sessions

ON the second day, October 11, general sessions of the USITA were called to order by president Mason. Following the singing of "America," Mr. Mason greeted association members and visitors who had gathered from

The USITA Association Co-Ordinating Committee serve as hosts to State Association executives. (l. to r.) Oscar Burton, Fred Switzer, Clyde S. Bailey, C. C. Deering, Chairman G. B. Foscue and H. F. McCulla.

E. W. Rodormer, Chicago a new member of the USITA Board of Directors.

all parts of the country and gave an address entitled "The Independent Telephone Industry Today and Tomorrow." His address is carried in this issue.

The report from association headquarters was made by Mr. Bailey and included a prediction that there will be no relaxation in public utility regulatory controls at any foreseeable time in the future, regardless of whether or not there is a change in the political complexion of the government in Washington. He felt that in the postwar era there is bound to be a resurgence of commission activities and with the return of their staffs there will be a "pent-up eagerness to embark on investigations of one kind or another."

Mr. Bailey pointed out that the national association had been solicitous of the interests of smaller companies in the industry and will continue to exercise the same degree of care in the years to come. He cited that it should be borne in mind no company, large or small, wants the association to run it. He declared that the companies are not the instrument of the association and rather the association is the instrument of the companies.

The USITA, he stressed, cannot in the very nature of things provide accounting, or engineering, or financial or managerial services to 6400 companies, or even any fraction of them, as that would require an enormous organization and an army of experts. Instead Mr. Bailey said the national association must concentrate on the broader aspects of the industry's common and national problems.

In his report to the convention, Mr. Bailey covered all details of the activities of Washington headquarters and brought the membership up to date on their present activities.

Mr. Deering submitted his last secretary-treasurer's report, including the announcement that the national association had grown considerably in membership. The applause following this report gave a demonstration of the love and affection all association members have for "Charley" Deering.

Following the nominating committee's appointment and announcements from the rostrum, noon recess was declared.

R. A. PHILLIPS, chairman of the active Advertising Committee of the association, was the first speaker during the afternoon session. His report is being reproduced full in another portion of this issue. His paper was sought after by many newspapers and news magazines throughout the country.

Government regulations which unreasonably limit the earnings of telephone companies discourage prospective investors and are harmful to telephone users and the public, Walter S. Gifford, president of the American Telephone and Telegraph company, said in his address.

"To furnish telephone service requires a lot of physical equipment which must be paid for," he said. "Thus the capital requirements are heavy, and every added telephone means still more capital investment. The telephone business must earn year in and year out enough so that those with capital to invest will want to put it into this industry.

"Operating costs include, besides wages, salaries, taxes, depreciation, and other expenses, the return on investment," he asserted. "We in the industry must convince regulatory bodies that it is against the public interest, and against the interest of telephone users in particular, to be so niggardly on this question of return that the financial soundness of the industry and its ability to secure the necessary funds for investment are weakened.

"Certainly we can't succeed unless our earnings are comparable to those of other industries. This applies not only to the larger telephone companies but also to those companies where the manager and owner is one and the same. The telephone industry belongs

An after sessions snap. Discernible are W. H. Dean, Washington; W. J. Scheidler, Indiana; Louis Pitcher, Ill.; and Claud Manning of the Kellogg Company, Chicago.

Colonel Wm. C. Henry, Vice President

to Main Street. It depends for its equity capital on the people of moderate income who are looking for a sound investment."

Mr. Gifford said it appeared likely the cost of providing telephone service to farmers after the war could be reduced substantially, but invited suggestions from the entire telephone industry to expedite accomplishment of this objective.

Reviewing the industry's war activities, Mr. Gifford said approximately 26½ million telephones are now in use, about 5 million more than in 1940. These include an unspecified number of instruments in 3,300 camps, bases, arsenals, shipyards, and government-financed war plants. Thousands of miles of private line telephone and teletypewriter networks were constructed to serve the military, he said.

He disclosed that long distance service more than tripled in three years of war, and that the shortage of local facilities for civilian use was largely a result of the necessity of manufacturing electronic and communication equipment for the military.

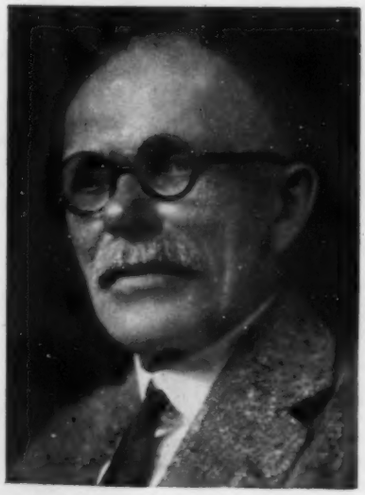
The panel discussion of Employment Relations problems completed the second day's program, with chairman John H. Agee, vice president and general manager of Lincoln (Nebr.) Tel. and Tel. Co., himself speaking on "Wage Trends and Their Effect on the Telephone Industry."

The telephone industry should analyze the social and economic problems confronting the nation, Mr. Agee declared, and if, to meet the situation, "we find it necessary to substantially increase wages, we should willingly and courageously add the increase to the cost of the service we are rendering." He added that honest management should be just as anxious to pay living wages as the employee is to receive them.

But, Mr. Agee emphasized, "if that means higher rates for the public to bear, we should not hesitate to advise our customers of the facts and ask our regulatory commissions for approval of the needed increases".

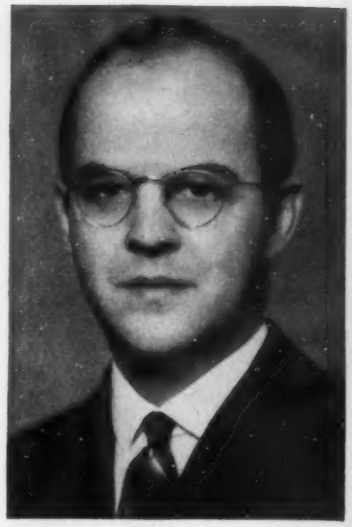
Regardless of politics, regardless of party preference, and regardless of the outcome of the election, Mr. Agee drove home the thought that "the time is here for industry to insist upon a sane, sensible course in the matter of regulation of wages and hours." He said that of equal importance is the necessity for modification of such laws as the National Labor Relations Act as well as a sensible approach to the question of taxation. He felt that the National Labor Relations Act most certainly should be promptly amended to give the employer equal privileges with the employee, adding that the basic right of labor to organize and provide for collective bargaining will undoubtedly be continued. In the case of the Fair Labor Standards Act, he commented that probably the greatest need for industry as a whole is a provision for a specific period of time beyond which no actions to recover wages for violations of the Act may be instituted. He added that the USITA committee has agreed it would not oppose a two-year statute of limitations and Wage-Hour Administrator Walling has promised he would cooperate in asking Congress to provide this protection.

Most of Mr. Agee's statement was taken up with a discussion of various problems of the Independent industry before the Wage-Hour Division. In discussing the lack of a period of limitations in the Fair Labor Standards Act, he summarized the recent court



John H. Wright, Jamestown, N. Y., has again joined the Board of the USITA.

Keith McHugh, A. T. & T. vice president, N. R. Powley, president of the Pacific Tel. & Tel. Co., Hunter L. Gary, Chairman of Board, Associated Tel. & Tel. Co., Walter S. Gifford, president A. T. & T. Co., and Chas. F. Mason, USITA president and president Associated Tel. Co., Ltd. pose for your Editor before Mr. Giffords address.



T. S. Gary, Chicago, a new member of the USITA Board of Directors.

opinion in the Federal District Court for Maryland which applied the twelve-year statute of that state to a minimum wage case for recovery of back wages. After a statute of limitations is obtained, Mr. Agee declared of prime importance for the Independent industry is a revocation by the Administrator of his definition of "switchboard operator" on the 20 percent time for work other than attendance at the switchboard. Mr. Agee said that after consultation with Independent companies and A. T. & T. representatives, a survey of switchboard operators in exchanges of less than 500 stations indicated that actually from 10 to 12 percent in the average small office would cover the time which the operator devoted to work other than attendance at the switchboard. He said he had given his opinion to the members of his committee and to the USITA officials that the law did not give the Administrator the right to make an arbitrary definition of that kind—this definition was issued during the regime of Colonel (now General) Fleming. (A ruling by the Wage-Hour Division on this subject has just been made which defines many of the non-switchboard functions of an operator as falling within her proper duties and not to be computed in the 20 percent exemption determination.)

Warren B. Clay, manager of Hutchinson (Minn.) Telephone Co., and F. M. Browne, vice president and general manager of Western Light and Telephone Co., Kansas City, Kan., presented papers at this session, which we will reproduce in full.

THE morning session of the final day included the report of the Toll Compensation and Settlements Committee, report of the Telegraph Committee, and the report of the Post-war Plans and War Activities Committee. All of these reports will be reproduced in full.

The election of directors was held during the morning session and at the noon meeting of the board, Mr. Boylan was elected president and will serve as the USITA chieftain during the association year until next October.

Frank Davies, president of the General Telephone Directory Co., was the first speaker at the final session. He discussed "Some Considerations Involving Telephone Directories," Mr. Davies made mention of several considerations involving telephone directories in his paper. He discussed the paper problem and the cooperation with the War Production Board in its conservation. He declared that to keep things rolling after the war, we must develop a set of conditions that will keep the number of small businesses in this country constantly increasing and expanding. "But business men," said Mr. Davies, "do have a responsibility to create markets that will create jobs, and it is along this path that telephone directories, and through them the telephone business, can play an essential part in our economy."

Mr. Davies further remarked, "In order to learn actually what influences control people in selecting firms with whom they do business, the Ohio Bell Telephone Company has made a signifi-

Members of the Traffic Committee. (Our camera could not stretch as wide as we hoped.)

Floyd D. Ridings, Washington, D. C., was elected USITA Secretary succeeding C. C. Deering, resigned.

Chas. C. Deering, USITA Secretary-Treasurer, resigned struck this typical pose when we asked for a final shot.

cant analysis. Arrangements were made with various firms advertising in the telephone directory to secure a list of all of their new customers. These firms understood that the telephone company planned to call these new customers and ask why the new customer had selected a particular place to do business.

"The survey was conducted in every way so as not to bias the answer secured. In quoting totals, which is all that time permits here, the fact should be borne in mind that all accounts are directory advertisers, therefore some of the other factors might not apply to all of the accounts included in the total. Thousands of new customers were interviewed but in terms of 100 interviews here are the reasons given by these new customers as to why they had selected a particular firm:

37—By reason of the recommendation of others
23—From advertising in the telephone directory
16—By reason of all other forms of advertising
9—Because of the reputation and business connections of the firm
9—Due to solicitation by the firm
6—By reason of the location of the business place, that is, they passed by the store.

"So that is one carefully prepared appraisal of what it is that influences people to do business with one firm rather than another. In this case 23 out of every 100 new customers were influenced by the telephone directory. Is there anyone who can deny that we in the telephone industry have a powerful instrument in our hands to help new businesses become established, and help established business stay in business?

"There are those of us who intuitively believe that these figures might apply in the case of service lines of business: laundries, cleaners and the like. However, one of the many interesting cases reported in the Ohio Bell survey was the report on a company selling coal and sand conveyors. The survey disclosed that out of the fourteen new customers interviewed for that firm, the conveyor company had secured eight new customers through the recommendation of others and six by means of a one-inch advertisement in the telephone directory."

The general discussion on tax problems was purposely scheduled as the concluding feature. Chairman H. V. Bozell, president of the General Telephone Corp., New York City, opened the discussion with remarks as to the general tax situation and to the telephone business particularly. His summation has appeared in our columns before. However, he reported that some progress has been made in presenting these facts through proper channels and that some relief would result only from constant effort by industry acting as a whole.

He introduced a member of his committee, Carl I. Wheat, Esq., Washington, D. C., to deliver a paper prepared for the occasion which we are reproducing in this issue.

Mr. Bozell is probably one of the most astute executives on tax matters in the Independent telephone industry and has made many appearances before government committees in his endeavors to relieve the telephone industry from the excessive tax burden now carried. We hope to present an exclusive feature from him on this subject in the near future prepared especially for TELEPHONE ENGINEER & MANAGEMENT.

Following his part of the program, an open forum was held on this subject.

The tax subject was the last on the program; however, we cannot complete this report without giving credit to the manufacturers and suppliers serving the telephone industry. Although no exhibits are allowed during telephone conventions held in wartime, executives and representatives of many firms were on hand to greet telephone operating men and advise them on their needs in the postwar era. The telephone industry considers its manufacturers as a direct part of the telephone operating industry, and an integral factor in our business.

The Independent Telephone Industry *Today*---and Tomorrow

Address by C. F. MASON,
Retiring President, United States Independent Telephone Association

I believe the time-honored pattern for a president making his retiring address is to give a so-called account of his stewardship, to wish everybody well, especially his successor, and then to disappear as quickly as possible. I am only going to break with this sensible tradition in two particulars: First, I am **not** going to review all the developments of the past year; second, I am certainly not going to take credit for them.

I remember too well Will Rogers' definition of a boaster—"a fellow who every time he opens his mouth, put his **feats** in." Besides, in this case, they were not my "feats." It would flatter my ego, perhaps, if I could truthfully tell you that one year ago, when I ook over the executive job of this Association, I found everything a total wreck, and I had to sail in and build it all up again all by myself, so to speak. But truth compels me to says that just the opposite was the case, as all of you well know.

I found in the Washington headquarters of the Association a hard-working staff, running smoothly, under control of our full-time executive officer, Clyde Bailey. This full-time organization operates under the supervision of, and in harmonious cooperation with an experienced board of directors. The result of this combination has been a year marked with association success, over which I have been proudly privileged to preside as your president.

Walter Herrmann (left) was caught in this shot while talking with Carl I. Wheat, Washington, D. C. (right) just before the latters address on tax matters.

Now don't get the idea that I jumped to this conclusion hastily—or that I am too easy to please! After all, I am a Californian. And Californians are so used to perfection, that it makes us pretty picky and choosy. I heard just the other day about a fellow Californian who died, and—naturally—he went straight to heaven, as all Californians do, as a matter of course. When he knocked at the pearly gates, St. Peter wanted to know who was there, and where he came from.

"I'm so-and-so," he said, "and I came from Los Angeles."

Poor old St. Peter just heaved a big sigh, opened up the door, and said: "Oh, all right, come on in then. But I can tell you right now if you're anything like the rest of the Californians we get up here, you're not going to be satisfied with the place."

So I can't honestly brag about anything I've done myself. I thought you might be interested in some things I learned, or believe I have learned, for myself since I have been on this President's job. It is barely possible that by passing on my reactions to these problems, I can make some con-

tribution to the stockpile of experience from which we shall all have to draw so heavily soon in the future when we must make definite decisions for post-war operation.

One thing that has made a lasting impression on me while I have been in office, is the increasing interest of our membership in these very meetings, such as we are holding here in Chicago. It is really astonishing when you come to think of it, that for the last two critical war years, the attendance at these meetings has broken previous records. I get the same story from the State Associations.

This, at the very time when war restrictions have compelled us to streamline programs, to curtail or eliminate altogether entertainment and social features. This, at the very time when we have extra expense and general hardship of travel and difficulty in obtaining accomodations. This, at the very time when the manpower shortage and other multiple problems of routine business make it more difficult than ever for the average telephone man to get away from his business several hours, let alone several days.

OF course, I hasten to add that the excellent program arranged for this meeting, featuring such a distinguished guest speaker as our celebrated colleague, Walter Gifford, president of the American Telephone and Telegraph Company, is tempting enough under any circumstances. But going back to my original thought, I have asked myself what is the reason for this intensified interest in business meetings?

I'll tell you my answer. It is simply this: I think that all of us in the telephone industry today instinctively look to these gatherings for guidance. We hope that by collectively pooling our best thoughts, through association action, we can find out answers to questions which, as individuals, we are having difficulty in solving during these critical times. I look forward as much as anyone else to an early return of the days when we can again hold these meetings in a more peaceful atmosphere of good fellowship which will take care, shall I say, of our social inclinations, as well as the strictly business emphasis made necessary by these wartime gatherings. May I say, at the same time, however, that this impressive attendance and interest are an inspirational challenge to, as well as a vote of confidence in our work as an association.

I am also impressed by the closer relationship and greater degree of co-operation which we have witnessed during these recent war months between the Bell System and our own United States Independent telephone industry. We have come a long way, of course, from the differences and bygone quarrels which characterized Bell and Independent relationships of a quarter of a century ago. Even before the outbreak of the present war, I think we all agree that we had learned to live together in peace, as a cooperative industrial brotherhood, with steadily improving understanding of each other's problems and only occasional friendly rivalry in certain areas.

But the war has closed our ranks even more firmly. In the face of a common crisis, requiring intelligent and coordinated action, we have shown the world that American telephony is American first and telephony second. Best evidence of this was the gentlemanly way we worked out, and are still working out, our toll compensation problem under the difficult pressure of the war and other conditions. I know I speak for the overwhelming majority of the Independent telephone industry when I say that I am confident this more friendly and mature atmosphere of Bell-Independent relations will survive this war, and prove helpful in solving our national industrial problems of reconversion and post war operations.

Understand, I do not say that Bell-Independent problems will not arise in the future. By the very essential and complicated nature of our business, such problems are inevitable. But I do say that we can settle these very problems, quickly and more satisfactorily by continuing the harmonious relations which now prevail, and which reflect our mutual respect for each other and our mutual desire for the welfare of our industry as a whole.

AFTER all, underneath it all we are both working for the same objectives, and differences in our organization are often more obvious than inherent. I remember several years ago we had a veteran line foreman in one of our Independent companies, whom I shall call Sam, although that was not his real name. Sam had also spent a number of years with one of the Bell System companies. He was an efficient and lovable character, with one notable peculiarity. He loved to grumble a lot—so much so that some of the younger men used to tease him.

One day a younger lineman said: "Look here, Sam, first you gripe about the time you worked for Bell and next you gripe about the Independent. Now tell me, honestly, what's the main difference?"

Sam thought for a minute and then answered very slowly: "Well, son, the main difference, as I see it, is this: In

Some of the New York state group yose for us. Malcolm Griswold (2nd from left) and Stromberg-Carlson president Wesley M. Angle take the prize for smiles in this one.

the Bell System you get ahead very slowly. Pay increases don't come often enough to suit you, and maybe if you live long enough you stand a chance of becoming vice president before you die. Now with the Independent, the trouble is the other way around. You got to be careful not to get ahead too fast. Otherwise, they'll make you a vice president **instead** of giving you a pay increase."

This was said in fun, of course. But I can understand a little how Sam felt, because I have worked both sides of the street myself.

One problem which has become somewhat acute during my term of office, and which involves a number of both Bell and Independent companies, is this attempt to convert payments for Federal excess profit taxes into utility rate reductions. I dare say most of you here have read the comprehensive articles in our excellent trade press, which have analyzed the origin and spread of this agitation. The origin, I believe, was in Detroit. But the spread, I happen to know, has reached California.

This idea of plowing back utility tax liability into liability for rate concessions is, I believe, a very dangerous one for our industry. First of all, it is dangerous to our public relations because it puts us in the false position of appearing to make too much money through excessively high rates. Secondly, it is dangerous to our rate structure, because rate cuts once made, on the basis of temporary surplus earning conditions, cannot easily be withdrawn when these conditions change, as they surely will when the war is over.

I am not going to labor the point that it is unfair and misleading to say that excess profits tax liability is of itself conclusive evidence of excessive rates. Before this so-called Detroit Edison doctrine made its appearance, I don't recall any particular dissatisfaction with the present level of telephone or utility rates generally. On the contrary, I think the public was impressed by the obvious fact that, in the midst of rationing, shortages and skyrocketing prices for virtually every other essential service, the regulated rates of public utilities have remained steady and in many cases are lower than before the war. Furthermore, established utility customers don't need a ration book—or have to stand in line to get service. In other words, while I **have** heard some housewives complain to OPA about the utility cuts of beef, they have not really been beefing about utility cuts in rates!

The real difficulty, I believe, springs from the unfortunate language in the Federal Statute which labels a certain abnormal tax liability as "excess profits taxes" when, in fact, they are "war taxes" and ought to be so called.

WHEN the war is over, we have reason to believe that these taxes will be soon removed or tapered off. But we have no guaranty that any short-cut alternative which might be forced upon us by way of rate cuts or rate rebates will pass with the war emergency. In short, I think this problem is going to take some careful study, and that it is going to be with us awhile.

In the case of the telephone industry, this situation shows the advantage of working for a sound over-all tax policy, both state and Federal. This question never would have arisen if these taxes were levied on the customer in the form of excise taxes instead of so-called excess profits taxes. I believe that honesty and plain speaking in the enactment or amendment of future tax legislation is the best hope for defeating these attempts to pervert what was intended to be a Federal tax-raising device into a political technique to subsidize local benefits at the expense of Federal taxpayers in general.

I note with interest a movement already under foot, headed by Beardsly Ruml, who pioneered our recent pay-as-you-go income tax reform, to lighten corporate taxes in such a way that this "Detroit Edison doctrine" would never be a problem at all. I hope that in the year ahead progress will be made on this unsolved industrial problem which, among others, I regretfully bequeath to my successor.

I was glad to see during my term of office, renewed interest in the plight of our smaller telephone companies. Sometimes, when I check back on what our Association has done and is doing for its members, I try to segregate those Association activities which might be said to help the larger companies, from those which help the smaller companies. Most of our Association work is broad enough, of course, to benefit all kinds of member companies—large, small, and medium. But I am also glad to say that where such a distinction is possible, our Association has labored just as diligently for objectives of primary concern to the small companies as for the larger and, perhaps, more affluent of our supporting members.

No one can truthfully say (and, as far as I know, no one has said) that

Paul Thoren (left) and Ross Byron, officials of Central Weest Utilities Co., Chicago, are discussing our Pre-Convention Number with Mary Strickler, manager Rossville (Ill.) Telephone Co. and Georgia Prather.

our Association is essentially a "big company association" or a "little company association." It has operated and will continue to operate for all Independent telephone companies, big or little.

But in the period ahead, I believe that we might well be justified in making a special effort for the smaller companies, for the simple reason that they are faced with special problems. Their problems do not, for example, as in the Detroit Edison agitation I have mentioned, have so much to do with paying excess profits taxes or cutting rates, but in getting high enough rates to make any profit at all, above operating expenses—aside from any question of taxes.

Of course, it may be some small consolation to these smaller companies that their rates are already so low that they are in little danger of being made the target of rate reduction agitation which bothers our large companies from time to time. After all, you can't fall out of bed when you sleep on the floor! But I think it is part of our job, all of us, to help these little fellows to get up from the floor. I am proud of the things our Association has accomplished in the past of special help to the small companies.

WAY back in 1934, our Association secured the Section 2(b)2 exemption in the Communications Act, which relieves the entire Independent telephone industry, with the exception of less than 100 of the largest companies, from any substantial jurisdiction of the Federal Communications Commission. There was our success in securing the enactment of the exemption of 500 station exchanges from the Wage Hour Law; our success just this past year in procuring some measure of relief from burdensome accounting requirements. But these are matters which our various committees and officials will report on to you in detail. So I am not going to take your time now with any duplicate recital of my own. But I WILL say this: **Our Association's work to help the small companies is going to go on with even more emphasis.** Of that I am confident.

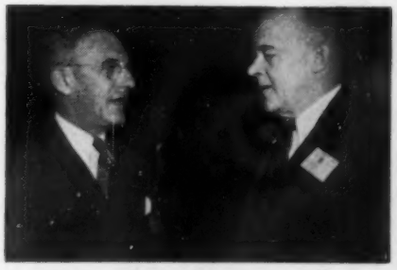
I am not going to pass on any of my advice, or tell the next administration what it should do about this small company question, or any other question, for that matter. But I respectfully submit that we, as an industry, **are** our brother's keeper. We might well paraphrase that beautiful scriptural passage: "Whatever happens unto the least of these, happens also unto us." In plain words, I think we are justified in giving special thought without delay, and taking whatever action is feasible and necessary to help the little companies to help themselves.

Here is an interesting huddle. John Sexton, Kelley McNish and Mr. Griffin, Bristol, Va., listening to Tom Boyd, New York. T. S. Gary is visible at center right.

The biggest industrial problem of the coming year, as I see it, will be reconversion, which our European war successes have already brought into such sharp focus. Actually, of course, there are two problems linked together. First, there is the problem of shifting our operations from war restrictions to peace expansion or rehabilitation. Secondly, there is the personnel problem of giving the returning veteran his proper job, while taking care of workers who stood by us during the storm, and, at the same time, complying with the numerous and changing labor and bargaining requirements of the government.

Included in this first category is the more or less immediate question of absorbing a certain quantity of surplus war goods which may be found to be of some good use in commercial telephone operations. I understand that the responsible authorities in Washington have already made some progress on a plan for handling distribution of these materials in a way that will be fair to the manufacturers and helpful to the operating industry.

In any event, however, solving this question is likely to call for patience and understanding on the part of both the operating and manufacturing industry. I am glad to say that our organization is unique in combining participation of both of these important industrial branches, thereby providing facilities for cooperative councils that might not otherwise exist, and which, as a matter of fact, do not exist in some other parallel industries and are likely to cause a great deal of trouble.



Dr. Ray Manson, Stromberg-Carlson Co., and Leighton H. Peebles of the War Production Board, conversing at the USITA Convention.

I look to see, in the postwar period, continued labor difficulties as the problem of giving jobs to returning veterans poses a challenge for the leadership of both management and labor groups. There is likely to be, in this situation, a temptation to resort to more and more government spending which, if it is extended far enough, will inevitably tend to channel into fields of direct government operation in public service. We saw a little of that in the WPA and PWA programs to end the depression of the early thirties. Fortunately, it did not then touch our industry directly. We may see more of it, if the postwar employment problem reaches large proportions, and we cannot be altogether sure it will not touch our own industry directly, in some form or other.

OUR Association's place in this picture, as I see it, is to give continued and effective testimony to the opportunities which lie in the preservation of our great American system of free private enterprise. These include the opportunities of direct bargaining between management and cooperative labor, as compared with the tragic examples of regimented management and regimented labor in totalitarian countries which inevitably resulted in the destruction of both management and labor as independent forces.

I think the American people generally are waking up to this dominant

(Please turn to page 60)

By E. H. DANNER,
Vice President, Telephone Services Inc.

Practicability Value and Technique of Preventive Cable Maintenance

IN practically every telephone exchange, whether large or small, there is some point, maybe only the cable entrance to the office, where the exchange service lines and quite often the toll lines serving that exchange pass beneath the sheath of lead covered cable. Insofar as the outside plant of a telephone company is concerned, more lines can be put out of service by a cable sheath failure than by the failure at one point of any other type of circuit carrying plant. In the average size exchange, the investment in the cable plant is approximately 1½ times the investment in the open wire plant and such cable plant investment is approximately 10% to 20% of the total plant investment. All of this leads to the point that the cable plant is a most vital part of the telephone plant both from the viewpoint of the subscriber who wants trouble free service, as well as the telephone company who desires to provide a good grade of service at a minimum of expense. It is therefore important that proper cable construction methods and protection and maintenance practices, be followed if a normal trouble free service life is to be secured from the cable.

Rather than basing this paper solely on personal experience, a survey was made of a group of representative telephone companies in order to secure the benefit of their experience. Following are the answers received to a questionnaire sent to ten companies serving 370 exchanges and approximately 405,000 stations in widely scattered geographical locations. The companies range in size from a single exchange company serving approximately 1600 stations to a company of 118 exchanges serving 69,000 stations and one of 23 exchanges serving approximately 180,000 stations.

Cause of Trouble	Ranked in the order of their Frequency				
	1st	2nd	3rd	4th	5th
Ring wear and ring cuts	5	3	1	—	—
Lightning	3	1	3	—	—
Sheath crystallization	1	4	2	—	—
Tree clearance	1	—	2	2	—
Power Crosses	—	1	—	1	2

1. Seven of the ten companies advised that they had in effect a program of Preventative Cable Maintenance.

2. All seven of the companies replied in the affirmative to the question whether such a program reduced cable maintenance cost, reduced service interruptions and extended the useful service life of the cable.

3. In response to the request that they list in the order of their frequency those causes of cable trouble which they most generally experienced, the chart above were reported.

The cable plant of one of the companies is wholly buried and that company listed trouble caused by excavations for sewer and water service as the most frequent source of trouble. One of the larger companies serving on the West Coast listed in second place trouble caused by holes bored in the cable sheath by a type of beetle prevalent in the greater portion of their operating area.

4. In reply to the question that they list in the order of their importance the five points which in their judgment if carefully checked, would contribute most toward reducing the number of cases of cable trouble, the top chart, next page, were reported.

5. Five of the companies advised that they had in effect some procedure for testing vacant cable pairs from the central office. One company stated that they had had such a program in effect for about a year but discontinued it as they did not secure enough information from such testing procedure to warrant its continuance.

6. All except one of the companies stated that they maintained a record of cable openings and made an analysis of the causes of the trouble requiring such openings.

BASED on the above information as well as discussions of this subject with representatives of other telephone

companies it appears that plant men quite universally recognize the need for and the advantages of a planned program of cable inspection and preventive maintenance and that while most of the larger companies have a plan in effect the majority of the smaller companies do not.

One of the most frequent reasons given for not carrying out such a program is that they do not have available the manpower or the skilled workmen. Considering that cable trouble is one of the most common causes of service interruption and that such trouble generally occurs during bad weather when also occurs more trouble than normally experienced due to defective drop wire insulation, open line wire leakage, blown fuses, etc., it is apparent that manpower is actually conserved if a preventive maintenance program is carried out. As to the need for skilled workmen it goes without questioning that a much greater skill and more experience is required to locate and clear the average case of cable trouble than is required for inspecting a cable and removing the possible cause of such trouble before any damage has occurred.

It is certainly easier and more pleasant for the workmen and less expensive for the company to have the regular working hours spent on the inspection and maintenance of the cable plant than it is to clear the actual case of trouble under adverse weather conditions and generally at the premium rate of overtime pay. As for the subscriber, he soon becomes irked if each time a thundercloud passes overhead his telephone goes out of service.

Estimates of the average cost of clearing a case of cable trouble range from $20.00 to $40.00 of which a considerable portion is the labor of the workmen, testing, locating, clearing and permanently repairing the trouble. One of the companies included in the survey advised that they had reduced their cable maintenance costs approximately 12½% and the number of service interruptions due to cable trouble approximately 46% through a program of inspection and maintenance. Another company who had in service a considerable amount of old cable, the replacement of which was deferred due to war time restrictions, reduced the number of service interruptions due to cable trouble approximately 50% the first year of their having in effect a program of cable inspection and repair.

Assuming the average size company with the normal amount of cable plant, the following outline of a suggested plan for carrying on a Preventive Cable Maintenance Program is given along with certain suggestions as to specific points to be checked.

Points to Check	Ranked in the order of their Importance				
	1st	2nd	3rd	4th	5th
Method of supporting (rings, spinning, zinc clips, etc.)	4	3	1	1	1
Strand Tension	4	2	—	—	—
Protection	1	2	1	2	—
Tree Clearance	1	—	3	2	2

Records

THE minimum records required to properly carry out such a plan are:

1. An accurate cable map showing the location of the cable; size and gauge; length of each section of different size and gauge; count of the cables; terminal location; count of the terminal and whether it is protected or unprotected; a notation of pairs not in service and where they are lying idle; the location of manholes and the size, type and location of duct runs.

2. A cable record showing terminal location and count; the line number assigned to working pairs and the terminals from which such pairs operate.

Supplementing the above records it is suggested that some form of cable trouble report be used in order that the plant supervisor will always be fully informed as to the openings made; the trouble found; the cause of the trouble; how it was cleared and the requirements for making a permanent repair or replacement (copies of 2 types of such cable trouble report forms in use by different companies are attached hereto.)

Tools

THE tools and testing equipment available and required in the clearing of trouble and the proper maintenance of cable plant are important. The following units are recommended as being a profitable investment for the average size company in that they will save time and assist in the performance of a workmanlike job: Cable Tone Test Set and Exploring Coil, Ohmmeter and Voltmeter, Arc Welding Cable Repair Kit and Wheatstone Bridge. It is of course, assumed that the regular cable tools such as a chipping knife, hammer, furnaces, wiping cloths, cablemen's scissors, Temperometer, hand test telephone etc. are available. Other tools which will be valuable additions to the above basic units are the strand dynamometer, direct reading ground resistance "Megger," gas pressure testing equipment and the conventional type insulation resistance "Megger." It is important to

CABLE TROUBLE REPORT

Change ..... **Date** .....

Location of Trouble .....

.....

Trouble Found and Cause .....

.....

No. of Openings Made ..... **Size of Cable** .....

How Cleared .....

.....

If temporary closure made was sheath bonded .....

Requirement for Permanent Repairs .....

.....

.....

Workman .....

Supervisor .....

Permanent Work Completed .....

Supervisor .....

J. I. Kennedy, Freeport, Ill., Leich Sales' Dick Faulheber and R. N. (Dick) Cole, Streator, Ill.

remember that "the tools do not make the man" but that training in the proper use of such tools will multiply many times the efficiency and skill of what would be an average workman without such tools.

Planning the Program

THE next step is to plan a schedule of inspection, to select the cables in the order in which they are to be inspected and to determine the frequency of such cable inspection. (On next page is a copy of a form of cable inspection report used by one of the companies.) Most companies follow the plan of inspecting their cable every 2 years but of course the frequency of such inspection varies with the importance of the particular cable as well as its condition. A trunk cable connecting a main exchange and a satellite office or a toll entrance cable should be inspected more frequently than a 25 pair cable serving a residential area because of the greater number of customers served and their comparative earning capacities. (If a planned two year program of inspection is set up and it takes four years to complete the first inspection, don't become discouraged as the second inspection will move much more rapidly due to the elimination of the faults found on the first inspection.)

In order to carry out the inspection as economically as is possible the use of highly skilled workmen must be held to a minimum. The major portion of such inspection and maintenance program does not require the services of a skilled cableman and therefore, it is suggested that a workman be trained with respect to what to look for under such an inspection program and how to correct the faults that are found. Probably no better guide can be given as to the points to check than those enumerated by the different companies in the survey referred to above.

Method of Supporting Cable

THE point receiving first place ranking in the survey was the method used in supporting the cable. It is therefore suggested that for ring supported cable the following points be checked in order to eliminate ring wear and cutting.

1. Check cable at least at each pole to determine the sheath damage and place cable rings saddle or zinc clips at the first two or three suspension points on each side of the pole. If the cause of trouble as revealed by an analysis of past cable trouble reports shows considerable ring wear or cutting in the section under inspection, it is then advisable to ride such sections of cable and make a complete inspection.

2. Rings should be straightened and respaced and defective rings replaced. In replacing such rings be positive that the same type and size of ring is used as that in place in order that the normal level of the cable is maintained.

3. Rings should not be used to suspend the cable where strand splices occur as too frequently such rings become "cocked" at an angle at which the entire weight of the cable is borne by one or two rings. Instead support the cable at such points by the use of zinc clips or lashing wire.

4. Rings should also be replaced with zinc clips or lashing wire at corners and crossovers.

5. Grade clamps should be placed at the following locations:

   a. where cables dead-end or connect to underground cables.
   b. the pole on each side of an underground dip in an aerial cable.
   c. bridge splices involving cable of 100 pair or larger.
   d. cables on grade of 5 per cent or more.
   e. corners where pull is away from the pole or a pull of 5 feet or more toward the pole.
   f. pole on each side of railroad crossing.

Since the spinning of cable in lieu of using rings has just recently come into the picture, insufficient experience has been gained to be positive as to the points which should be watched. The following checks are suggested not because of any frequency of their occurrence but because they have been found when inspections have been made and there is a possibility of sheath damage occurring.

   a. The initial practice was to cover the cable at strand crossovers, deadends and strand splices with a projecting lead shield and to spin the cable snugly to the strand. Several instances have been found where the protective shield has slipped especially if it is held in place only by means of the spinning wire. The accepted practice now is to suspend the cable at such points by means of zinc clips. The Bell Companies now use a strand connector at the pole to eliminate the strand splice in the span.
   b. In several installations it has been found that if the old figure eight lashing wire tie with a piece of lead sheath to protect the cable is used at the pole, the lead shield has slipped out of position and the cable rubs directly against the cable support.
   c. If the old style span clamp which is attached to the strand by means of a one-bolt clamp is used, the sheath should be protected. Most companies do not

Joe Kopp of General Cable and Stan Sherman of Automatic Electric Sales in a huddle during USITA Convention.

consider it good practice to use the old style span clamps with lashed cable. The Bell Companies now have a new type of span clamp especially designed for use with lashed cable.

It is generally accepted that the spinning method of supporting cable will do much toward eliminating cable trouble, but it is not wise to consider it a cure-all remedy for all cable ills. Instead, frequent inspection should be made of such installations to determine the weak points, if any, before any material damage can occur.

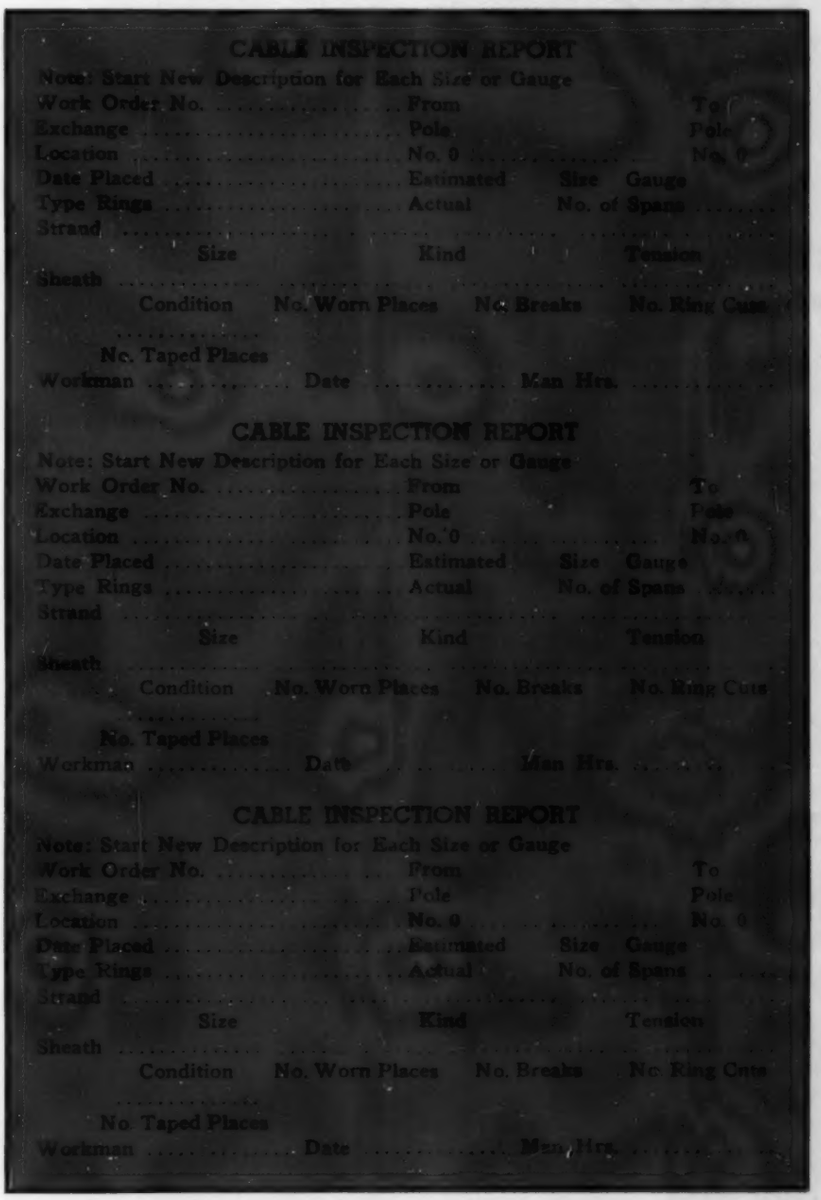
Tension of Strand

IN second ranking of the points to be checked to prevent cable trouble is strand tension. Most plant men agree that the placing of the messenger strand at the proper tension is probably the most important factor contributing toward the trouble-free service life of cable. Despite this common agreement, there is probably more cable suspended on strand which is excessively tight or slack than there is at somewhat near the proper tension. The proper time to check this point is when the construction work is performed as the process of removing or cutting in slack after the job is completed is a difficult and expensive process, especially if the section in question has a high terminal development or numerous branch feeders. Too tight strand is generally indicated by bowing at the poles and waviness in the span. If both the strand and cable are too tight, then no bowing or waviness may appear, but very often sheath crystallization and ring wear occurs due to excessive vibration. Too little tension causes excessive ring wear at the peaks occurring at the poles. The tension of strand with cable in place can be easily checked with the offset type of dynamometer, but if such is not available the same check can be made by using sag gauges. Slack guys, broken poles and changes in the height of the attachment of the cable to the poles all cause change in strand tension. To slacken off or tighten a messenger requires that all bonds, lashing supports and grade clamps be removed, that the suspension clamps be loosened and lubricated, that the cable rings at the pole be moved, that false dead-ends be released and, as an added precaution, the top strap on the cable terminal stubs should be removed. Such a process should be confined to relatively short sections, as it is generally difficult to make the strand run freely through the suspension clamps especially when supporting the larger size cables. Again, it should be emphasized that the time to prevent this source of trouble is when the installation is made.

Protection

THIRD ranking in the points to check was protection. There are different schools of thought as to how adequate protection of the cable, especially from lightning damage, can best be accomplished. I do believe that it is a matter to which much study should be given at present because of the change from ring supported to lashed cable and changes in the type of power construction and the continued extension of power lines. Often a method of protection which may prove successful in one area may not be successful in another due to different soil and power conditions and the type of construction used. The following suggestions are made:

1. An adequate low resistance C. O. ground is required and all cables entering a central office building should be bonded together inside the building and grounded to the central office ground.
2. The sheaths of all the cables should be bonded in each manhole.
3. A bond between sheath and strand should be placed at every tenth pole of aerial cable and at the first pole on each side of an underground dip or trolley crossover.
4. Where two or more cables are on the same pole line but are not supported from the same suspension bolt, they should be bonded together at the same point where their respective sheaths and strands are bonded.
5. The sheath continuity of aerial



CABLE INSPECTION REPORT

Note: Start New Description for Each Size or Gauge

Work Order No. ..... From ..... To

Exchange ..... Pole ..... Pole

Location ..... No. 0 ..... No. 0

Date Placed ..... Estimated ..... Size Gauge

Type Rings ..... Actual ..... No. of Spans .....

Strand .....

Size ..... Kind ..... Tension

Sheath .....

Condition ..... No. Worn Places ..... No. Breaks ..... No. Ring Cuts .....

No. Taped Places

Workman ..... Date ..... Man Hrs. .....

CABLE INSPECTION REPORT

Note: Start New Description for Each Size or Gauge

Work Order No. ..... From ..... To

Exchange ..... Pole ..... Pole

Location ..... No. 0 ..... No. 0

Date Placed ..... Estimated ..... Size Gauge

Type Rings ..... Actual ..... No. of Spans .....

Strand .....

Size ..... Kind ..... Tension

Sheath .....

Condition ..... No. Worn Places ..... No. Breaks ..... No. Ring Cuts .....

No. Taped Places

Workman ..... Date ..... Man Hrs. .....

CABLE INSPECTION REPORT

Note: Start New Description for Each Size or Gauge

Work Order No. ..... From ..... To

Exchange ..... Pole ..... Pole

Location ..... No. 0 ..... No. 0

Date Placed ..... Estimated ..... Size Gauge

Type Rings ..... Actual ..... No. of Spans .....

Strand .....

Size ..... Kind ..... Tension

Sheath .....

Condition ..... No. Worn Places ..... No. Breaks ..... No. Ring Cuts .....

No. Taped Places

Workman ..... Date ..... Man Hrs. .....

Reliable's George C. Rodormer and Stromberg - Carlson's Ralph Berger are the gents taking it easy in George's room after sessions.

cable should be maintained by bonding the sheaths together to the strand on each side where taped openings occur. Three or four cable pairs twisted together are not adequate bonding. A suggested form of temporary bond is to use a piece of bonding ribbon with a pipe ground clamp sweated to each end and attach the ground clamps to the sheath on each side of the taped opening.

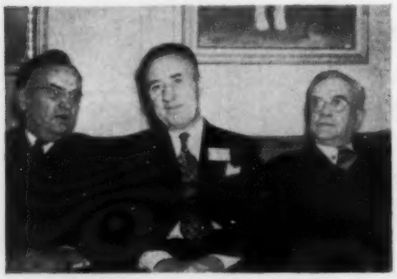
6. The sheath and strand should be bonded where the ground wire from a protector mounting or terminal is connected to the strand.

Grade clamps are normally acceptable in lieu of bonds but the effectiveness of some of the newer types of grade clamps which have such a small bearing surface on the sheath might well be questioned. The need for bonding cable supported by spinning may be questionable, but considering the small cost it appears advisable as an added precaution.

I, personally, belong to the school of thought that protected cable terminals should be effecively grounded to a ground electrode at the pole and that such grounds should be tested at least once a year. Such inspection can easily be made by an unskilled workman by means of a direct reading ground resistance "Megger." A recent inspection of such grounds, by a certain company, revealed that only 20% of them were adequate. Further, I subscribe to the thought that all exposed open-wire lines over ¼ mile in length should be protected by an adequate type of discharge block protection located at a point approximately 500 to 1000 feet from the end of the cable and effectively grounded.

Tree Clearance

NEXT in the order of importance was listed tree clearances. Tree growth interfering with cable plant will cause the bunching of rings, chafing and wearing of cable and under some conditions, the excessive vibration of the strand and cable which will cause ring wear and crystallization. It is generally assumed that the cable is adequately protected if a tree guard is placed. Actually the cable is protected against chafing and wear by actual contact with the tree, but often the movement of the tree in the wind will cause it to beat against the guard and cause excessive ring wear and crystallization. Such interference can frequently be cleared by the raising or lowering of the cable or the use of cable arms. The use of the wire spinning method of supporting cable permits the ready use of moulding placed over both the strand and cable for protection against small tree growth and underbrush.



Royal Brewster, Lincoln, J. H. Hazlett, California, and John I. Kennedy, Freeport.

Lieut. Pankey USNR, a former Kellogg man and C. E. Brown.

In the inspection of aerial cable plant there are many items other than those referred to above which should be checked, namely, power clearances, pole stepping, sleeve lashing, terminals, clearances over streets and alleys, etc.

The inspection of underground cable has not been touched upon as the exchanges of many companies are served wholly by aerial cable plant. If underground plant is in service, it is suggested that the following be inspected:

a. In manholes — bonding of cables, support of cables on racks, need for shields at duct entrance, debris in the manhole and the sealing of vacant ducts.

b. At underground risers — strapping of cable to the pole, cable guard in place and duct sealed around cable.
Periodic electrolysis test should be made in exchanges having trolley or interurban service. Electrolysis has also been encountered in the vicinity of gas and oil pipe lines.

The arc welding method has proven very effective in the repair of cable sheath damaged by ring wear or cutting. The following precautions are suggested when this method is used.

a. If the sheath is worn through **do not weld the cut** as moisture may be sealed in the cable.

b. If, after the cable has been welded, it remains suspended in rings, there have often occurred sheath breaks next to the point of welding but if the cable is supported by spinning, no such trouble has occurred. The condition and type of sheath as well as the ring spacing will affect the number of breaks occurring in the ring suspended cable.

c. The ring cut must be well cleaned and tinned in order to obtain an effective weld.

Many practices and procedures which should be made a part of cable inspection and maintenance program have been omitted as time does not permit heir inclusion. Just like all the other preventive measures we find that the extent and degree of work required to maintain a cable plant in good operating condition depends upon the care used in making the original installation. In other words, the prevention of trouble in a cable plant begins with the construction of that plant and its inspection should start the day after it is completed and continue at reasonable intervals for the remainder of its life.

(*Delivered before the Plant Conference of the USITA* 1944 *Convention.*)

Committee On

Postwar Plans and War Activities

E. C. Blomeyer, Chairman

FROM time to time during the year the Committee has reported on its current war activities, in statements, pamphlets and other distribution through Association channels. We will not consume time here by describing those activities again. Consequently this report will deal principally with the Committee's activities as to postwar planning.

Since the October, 1943 report on this subject, made by our predecessor committee, the Postwar Planning Committee, it has become possible to see more clearly the prospective shape of at least some of the things to come. Even so, the Committee points out that statements based on what anyone believes may or will happen are to a large extent prophecies, and must be dealt with as such. The Committee's statements as to what it thinks will happen after the war are, therefore, only expressions of opinion, based on the Committee's study of such matters and of their apparent present trends.

Governmental Controls

THE necessity of making peacetime employment available to millions of people as soon as possible after their wartime employment or military service ceases will, we think, result in cessation or relaxation of many, if not most, government wartime restrictions on industry immediately after the end of the war in Europe. Preparation for this is already being made by government and its agencies.

On September 5 the War Production Board announced a broad plan for the relaxation of its controls on production for civilian uses at the end of the European war. This plan comes generally to the proposition that civilian production and activities are to be limited, after Germany is defeated, only to the extent necessary to supply the things necessary for carrying on the war against Japan.

It is a part of the plan, however, that WPB will continue such controls as may be necessary to enable essential industries, such as utilities and including the telephone industry, to continue to function without demoralization of their services through the remaining war period and until normal peacetime operations can be resumed.

Applying this specifically to the Independent telephone industry, it apparently means that, after the end of the war in Europe, all the production of Independent manufacturers above that needed for the war with Japan, will be available to Independent telephone companies, but that, excepting as to emergency cases, the industry will have no priorities upon materials, manpower, etc., as against other industries. It also apparently means that practically all limitations against extension of telephone plant and central office equipment, and maintenance work, rehabilitation work, etc., will be removed; the company's ability to do these things will depend on its ability to obtain the equipment, materials and manpower with which to do them.

It also apparently means that some protection will continue to be afforded operating companies with respect to their obligation to take care of all unfilled orders for telephones.

Since the position of the Communications Division of WPB on these matters is being discussed at this convention, we will not prolong our report by going into detail on the situation, excepting that we bring to the attention of operating company managements our following opinion regarding the amount of new telephone equipment that will be available after the end of the European war.

Independent Manufacturing

AS has been stated, the new WPB plan means that, after the end of the war in Europe, all capacity of Independent manufacturers above the things they are called upon to make for the prosecution of the Japanese war will be available for Independent operating companies without priorities and with few or no restrictions upon their use by operating companies.

We point out, however, that this may not mean that a large amount of equipment will be available to operating companies immediately or soon after Germany is defeated. Communications equipment, such as is now being made by the Independent manufacturers, will remain one of the first-rank military essentials, and will continue to be needed for military purposes in great quantities. It is very doubtful if the military demand on Independent telephone manufacturers will be substantially reduced immediately after the end of the European war, although it will no doubt be reduced more and more as the war with Japan progresses.

It is our opinion, therefore, that managements of operating companies should not count upon any great quantity of new telephone equipment being available to them immediately or even very soon after the war in Europe ends, although the amount available will, we believe,

C. L. Jones, R. A. Lumpkin, Mattoon, Ill. H. M. Stewart, Ft. Wayne, and Arthur O. Black, Butler, Pa. were attending all sessions.

increase as the Japanese war nears its end.

We suggest that operating companies needing postwar equipment should discuss their situation with their manufacturer or supplier at once, since an orderly scheduling of manufacturing for civilian use will be helpful to both operating company and manufacturer.

Surplus Government Equipment

IT is a known fact that a vast amount of many kinds of things acquired by government for military purposes will become surplus government property after all hostilities cease; much of it will become surplus when the European war ends.

How much of this surplus will be telephone equipment, usable for or adaptable to commercial telephone use, no one now knows.

It is known, however, that in all governmental postwar activities the emphasis will be upon the creation and maintenance of a high level of employment. It has been announced in substance that government will not dispose of surplus property in such manner as to lessen postwar employment.

This proposition of the disposal of surplus government property has been having considerable debate in Congress, which is making the policies and setup for dealing with the situation. Until all those things are defined, we cannot know just how it is to be dealt with.

Since a great deal of the military production of the telephone manufacturers has been of specialized articles for strictly military use, rather than telephone equipment of or near the commercial type, we think it likely that the amount of commercially usable surplus telephone equipment will be smaller than some may have thought, especially since it is stated that quantities of American-made telephone equipment will be used for rehabilitation in devastated countries.

Because of the present uncertainties in this matter, the only recommendation that we can make upon it now is that it is one upon which the Association should keep close and constant watch, so that it may keep its members fully informed on it at all times.

Growth

IN April and May, 1944, the Committee took a poll of a number of Independent companies of various sizes—and, therefore, representing a good cross-section of the Independent industry—on several questions. The companies polled operate more than 830,000 stations.

Eighty-four percent of these companies, representing 87% of the stations, reported that they had a larger than usual net gain in stations since 1940, and 76% of the companies that had made such gains reported that they expected a net loss in stations either before or soon after the end of both wars. In a preponderance of cases the loss expected was around 25% to 50% of the net gain since 1940.

We think this indicates that the station net gain or net loss situation immediately after peace comes is a local issue, and will vary greatly in different territories and exchanges, depending on the amount and kind of war activities that have been carried on in each place.

We believe, however, that possibilities exist for a large postwar growth in telephone stations over the long term. We think a considerable portion of this growth will occur in the natural course of events, from growth of the population and from a larger per capita demand for telephone service than has ever existed in this country before, due to the fact that, during the war, many people have become more than ever accustomed to and dependent upon the telephone.

We submit, however, that a large long term postwar growth in telephone stations does not necessarily mean that Independent companies will receive their pro rata share of such growth unless they act on their own behalf to obtain it. It is a generally known fact that station growth is usually smaller, on a percentage basis, in smaller cities and towns—in which most Independent companies operate—than in the large metropolitan centers.

We recommend, therefore, that all Independent companies plan and organize now to sell telephone service. Such efforts should be directed at retaining as many as possible of the stations gained during the war, to selling additional residence extensions when they can again be installed and, when the held order situation existing at the end of the war has been taken care of, to sell telephone service to the many people in every community and exchange area who do not then have it. We believe, in other words, that Independent companies should become "sales minded" in order to obtain their due share of the postwar growth in telephones.

Postwar Earnings And Rates

FOR the year 1943 the Independent telephone companies of the country, taken as a whole, had the highest gross revenue in their history. According to the statistics compiled by the Association, the gross revenues of Class A and Class B companies reached, for 1943, the unprecedented total of 117 million dollars. Indications are that gross revenue of the Independent industry was more than 40 million dollars higher than its total gross revenues for the year 1939, the last year before the effects of defense and war activities began to be felt by industry.

During these four years Independent companies taken together experienced, of course, a large net gain in their number of stations in service.

The result of this situation has been that for the year 1943 the net operating revenues of the Class A companies averaged around $5.00 per station more than they did for 1939, or for the average of the three prewar years of 1937, 1938 and 1939. By the same comparison, the net operating revenues of the Class B companies averaged some $3.00 more per station.

There is, however, a "fly in the ointment" in this apparent picture of prosperity, and also a potential danger for the postwar years.

The same Association statistics that are quoted above, show on analysis that the net amount available for dividends of the Class A and Class B companies, taken together, were almost 50c per station lower in 1943 than in 1939. One important reason for this was that the Class A and Class B Independent telephone companies paid some 26 million dollars in taxes for 1943, as compared with about $9,100,000 for the year 1939.

The potential danger in the situation comes from the fact that, of the large increase in gross revenues for 1943 over

1939, about one-half came from increased toll revenues. In fact, the net toll revenues of the Class A and Class B companies, taken together, more than doubled in the four years. For 1939 the amount was about 16 million dollars; for 1943, more than 35 million dollars.

As every telephone man knows, toll revenues can slump sharply and quickly. It is important, therefore, to analyze the relation of toll revenues to total present revenues of Independent companies.

As to the 151 Class A Independent companies, toll revenues increased from an average of $8.69 per company owned station in 1939 to an average of $14.31 per station in 1943. (The term "company owned stations" as used here includes P.B.X. and extension stations.)

As to the 81 Class B companies, toll revenues increased from an average of $7.61 per company owned station in 1939, to an average of $11.77 per company owned station in 1943.

(It should be stated that practically the same averages are arrived at if, instead of using the year 1939 for the comparison, there is used the average of the three years of 1937, 1938 and 1939. The difference is only a few cents in either case.)

The figures quoted show an average increase of toll revenue per company owned station of $5.62 for the Class A companies. But, during the same period, the increase of exchange revenue was only an average of 78c per company owned station. And, during the same period, the increase in operating expense (exclusive of accruals for depreciation, and taxes) was an average of $3.41 per company owned station.

As to the Class B companies, the increase of toll revenue averaged $4.16 per station; the increase of exchange revenues averaged 13c per station, and the increase of expense averaged $2.73 per station.

It is clear from the foregoing that many Independent companies are more heavily dependent now on toll revenues than they have ever been before. It is also clear that a sharp decline from the present very high rate of toll business would in many cases have a serious effect upon the net earnings of Independent companies. It is hoped, of course, that reductions in Federal taxes after the war will to some extent cushion such a shock —and this will be particularly true in the cases of companies now paying Federal Excess Profits Taxes if such tax is abolished—but there can be no certainty that the two events would occur simultaneously, or that any tax relief would actually overcome loss of toll revenues.

The Committee points out, therefore, that in many cases exchange rates must be raised so as to carry their full share of the increase of expenses that have come about during and that will remain after the war period, and we think it must be assumed that much of this increased expense will remain after the war period. It seems an inescapable conclusion that the price for exchange telephone service, like prices of many other things, will have to be put on a level to fit existing expenses. We believe that every Independent company should be making, now, its plans for doing that.

L. Kerlin and our Roy F. Smith enjoy a chat during the USITA Convention.

Taxes

IT is generally recognized that the amount and method of postwar Federal taxes will have vital influence on the level of postwar employment. There is now more widespread interest in Federal taxation than there has even been before, and many organizations have been formed to study and make recommendations on postwar taxes from the employment standpoint.

It is calculated that the postwar annual Federal budget will be around 2½ to 3 times the normal prewar budget. It is obvious that under such conditions, postwar Federal taxes must be higher than prewar.

From the standpoint of the maintenance of a high level of postwar employment—which we must have if we are to avoid postwar depression—the method of application of Federal taxes is as important as the amount levied. To maintain employment, taxes must be levied in such manner as to encourage business expansion and the establishment and growth of new businesses, rather than to deter such activities, as present tax methods do.

We believe the Federal Excess Profits Tax will be repealed after the end of the Japanese war, and that it will probably be ameliorated before then. We think that such nuisance taxes as the "Capital Stock and Declared Value Excess Profits Tax" will be abolished. As to corporate normal tax and surtax, it is difficult to predict—except to say that there is a strong movement, from nearly all directions, to eliminate or minimize the present double taxation on corporate earnings paid out as dividends. Several ways of accomplishing this have been suggested and whether any final plan will include reduction or elimination of corporate normal tax and surtax or whether the desired end will be accomplished otherwise cannot be predicted with any certainty.

We think Congress will make a sincere effort to adjust Federal taxing methods so as to encourage business and employment.

Farm Telephones

THE report last year of the Postwar Planning Committee recom-

Convention Dates

South Dakota Telephone Association, Hotel Widman, Mitchell, October 19.

Georgia Telephone Association, Hotel Henry Grady, Atlanta, October 20.

Virginia Telephone Association, Hotel Roanoke, Roanoke, October 26 and 27.

North Carolina Telephone Association, Hotel Pine Needles, Southern Pines, November 13 and 14.

Alabama Telephone Association, Hotel Jefferson Davis, Montgomery, November 13 and 14.

South Carolina Telephone Association, Hotel Claremont, Sumter, November 16 and 17.

Missouri Telephone Association, Hotel Muehlebach, Kansas City, November 21 and 22.

Oklahoma Telephone Association, Hotel Huckins, Oklahoma City, November 27 and 28.

Fred Switzer, seated at left president of the Harrisonburg, (Va.) Telephone Company brought a number of employees along for the National Convention.

mended that study be made by the Association of the existing and prospective farm telephone situation, with the idea of finding things that could be done to maintain and increase the number of farm telephones. This matter was referred by the Association to its Commercial Committee and Plant Committee and is now in their hands.

This question is of paramount importance to the entire telephone industry, and of particular importance to companies operating in rural sections. Indications are that unless the telephone industry itself finds and applies the solution to the farm telephone problem, agencies outside of the telephone industry—perhaps governmental agencies—will undertake to do that. Already there are signs of such happenings.

On September 20 a commissioner of the Federal Communications Commission, in a public address, called attention to the farm telephone situation, saying among other things that while total telephones in service had increased 35%, the number of farm telephones had decreased nearly 40%, and pointing out sections of the country where more than 95% of the farms were without telephone service, and suggesting in effect the establishment of a "telephone REA" to take care of the farm telephone situation. (incidentally, the Committee feels that as of 1944, the farm telephone situation is not as bad as is stated by the commissioner.)

A well-known newspaper columnist has taken up the issue under the slogan "Phones for Farmers," and suggesting that the REA has shown the way to provide telephones on farms.

In the Committee's opinion this matter is one of great importance to the entire telephone industry, and one which deserves and requires persistent and concentrated effort by telephone companies and by the national and state associations. The Committee recommends that the proposition be given a high priority in the Association's activities, and suggests consideration of the creation of a special committee, which special committee could give its entire attention to the important question.

Pension And Retirement Plans

THERE has been put up to the Committee the proposition that it should study pension and retirement plans applicable to Independent telephone companies and suitable especially for smaller companies, and make recommendations on the matter.

Hunter L. Gary (right) with Mrs. Gary and his assistant G. H. Reimers snapped after Mr. Gifford's address at the USITA.

The Committee has made such a study, but finds that the sizes and conditions of Independent companies vary so greatly that it is impossible to suggest any one plan that would fit all of them. This is unquestionably a proposition that must be worked out separately by each company interested in it, to fit its own circumstances and its ability to inaugurate such a plan.

The Committee recommends to the owners and managements of Independent companies that they give consideration to the practicability of the inauguration of a pension or retirement plan for their company, and recommends to the Association that it have prepared, and that it circulate to member companies, a description of and information concerning the various kinds of pension and retirement plans that are customarily used in industry.

Technological Improvements

THE Committee is of the opinion that it is not to be expected that technological improvements in wire communication, made during or as a result of the war, will bring about any immediate basic change in telephone apparatus or practices. While such improvements, inventions and discoveries will, of course, in time have their impact on wire telephony, they will, in the Committee's opinion, come into use gradually and over a period of years, like any development of the art. It is probable that war discoveries will somewhat accelerate developments in telephony during coming years, but, in view of the time required for the adaptation of new developments to any industry, including field and other tests that must be made of them, it hardly seems possible that there will be basic changes in telephone apparatus and practices immediately or even very soon after the war.

Depreciation

OUR predecessor Postwar Planning Committee, in its report last October, suggested that wartime usage and lack of replacement of telephone equipment and plant would require an increase in postwar depreciation accruals, and recommended that the Depreciation Committee of the Association make a study of this situation.

The Depreciation Committee made such a study, and has stated that, in its opinion, the condition named would apply to so small a percentage of a telephone plant that it would not affect the overall rate of provision for depreciation.

The Committee is grateful to Mr. Clyde S. Bailey and the others of the staff of the Association, for the help they have given it during the past year. It also expresses its appreciation for the

R. A. Lumpkin, Mattoon, also appeared on program of Post War Plans & War Activities Committee.

cooperation of the state associations, twenty-three of which appointed, at this Committee's request, Postwar Planning Committees which have cooperated wholeheartedly with this Committee during the year. All of this assistance has been of great help to this Committee.

E. C. Blomeyer, Chairman
R. A. Lumpkin, Vice Chairman
W. M. Angle
H. V. Bozell
C. D. Brorein
Alden L. Hart
R. A. Phillips
J. R. Porter
Lloyd Wright

Small Illinois Company Sold by Court Order

All of the assets of the Green River Telephone Co., which serves about 60 patrons in Harmon, Ill., and vicinity were sold by a court attache during September for $25. Harry Ostrander, postmaster at Harmon, Ill., was the purchaser and it was reported that he had plans for reorganizing the company and continuing telephone service to the Harmon community.

The sale was held following the granting of a judgment to the Dixon Home Telephone Co., at a hearing before Justice Elwin S. Wadsworth. The purchaser of the assets plans to continue the present service temporarily until a new company is formed and it is expected that the Green River Telephone Co. will be dissolved as an Illinois corporation. The company was organized about 1910 and for years has been served with trunk lines from Dixon and Sterling.

Read what One of America's Finest Mortuaries says about Telephone Directory Advertising and about Our Service.

Lon E. Peek
President
Mottell's Mortuary
Long Beach, Calif.

Mottell's was established in Long Beach in 1919. Architecturally it is one of the most beautiful establishments in California and, in number of funerals conducted it is among the leading mortuaries in the United States.

MOTTELL'S MORTUARY & CHAPEL J. J. MOTTELL, INC.
Third Street at Alamitos Avenue · Long Beach, California

Sept. 15, 1944.

General Telephone Directory Co.
Press-Telegram Bldg.,
Long Beach, California.

Gentlemen:

I am enclosing a signed contract covering our space in the new telephone directory and I want to take this opportunity to tell you again how gratified we are with the results which this advertising produces and with the very cooperative service your staff has given us.

As you know, we do considerable advertising, using various media. So I think you will be pleased to know that we look upon our telephone directory copy as the real "backbone" of our publicity effort.

Very truly yours,

J. J. MOTTELL, Inc.
Lon E. Peek, President.

LP/cj

"Making More Money from Your Telephone Directory"

This is the title of an interesting booklet dealing with the experience of this Company in the sale of telephone directory advertising and the publication of directories for various independent telephone companies. If you wish a copy, we shall be glad to mail one to you upon request.

GENERAL TELEPHONE DIRECTORY COMPANY

EASTERN OFFICE: Ben Hur Bldg., Crawfordsville, Indiana
WESTERN OFFICE: Press-Telegram Bldg., Long Beach 2, Calif.

STROWGER AUTOMATIC TELEPHONE EQ

First on Post-War "Want Lists"

Telephone managers' "want lists" for the future have grown tremendously since wartime shortages have prevented all but the most essential purchases. Heading many of these lists is STROWGER AUTOMATIC TELEPHONE EQUIPMENT.

For every telephone switching need—in large exchanges and small—in private branch exchanges and widespread toll networks—Strowger Automatic has become the standard of progressive operating organizations. During these war years, they have seen Strowger Automatic equipment continue, in spite of heavy traffic and reduced personnel, to render fine telephone service at low cost.

Now is the time to perfect over-all plans for ***your*** postwar needs—and to build those plans around Strowger Automatic. We are ready to help you in every way we can without interfering with our production for war. Consult our field representative, or write us direct.

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Export Distributors: INTERNATIONAL AUTOMATIC ELECTRIC CORPORATION

ARMY E NAVY

CENTRAL OFFICE EQUIPMENT

Strowger Automatic Telephone Equipment economically meets every modern service need in exchanges of every size, and provides maximum flexibility for meeting growth or change, in traffic or number of stations. Standard apparatus units, in a wide variety of types and mountings, can be arranged to provide the combination best suited to your specific needs.

PRIVATE AUTOMATIC BRANCH EXCHANGES

Provide business organizations with a combination of fast, modern dial service on interior calls and supervised service on incoming and outgoing city and long distance calls. P-A-B-X equipment is available in types and capacities to meet every requirement. Large units may be equipped, when desired, for special communication and control services to meet individual needs.

COMMUNITY AUTOMATIC EXCHANGES

We offer a complete range of unattended automatic units for small exchanges, providing modern, 4-hour dial service on local calls, and fast, convenient toll service through your attended exchanges or those of connecting companies. C-A-X equipment is especially designed to meet small-office conditions, and is adaptable to individual offices or networks.

TOLL SWITCHING EQUIPMENT

Use of Strowger Automatic equipment in toll switching speeds up toll service, improves toll line efficiency, saves operating costs, reduces errors and delays. Typical of modern Strowger developments in this field is the Automatic Toll Board illustrated above, consisting of simple manual positions for the control of automatic toll switching apparatus.

Independent Pioneers Hold Meeting

Snapped during acceptance of G. B. Foscue, Chicago, to again lead Pioneers. J. K. Johnston at right.

The annual meeting of the Independent Pioneer Telephone Association was held during October 10 at the Stevens Hotel, Chicago. It was the largest business meeting ever held by this organization and those attending were amply repaid by the fun enjoyed. Following a short business session, an outstanding entertainment program was presented with world famous talent.

President G. B. Foscue, Chicago, delivered an address to open the meeting and gave details of the Association year. He outlined the developments in which a new set of by-laws were prepared and adopted by the Association in April of this year. He paid particular tribute to the secretary treasurer, J. K. Johnston, who has held that position since he organized the association in 1920.

Mr. Foscue outlined the new procedure in nominating the directors and officers of the Association and during the meeting introduced B. L. Fisher as chairman of the Nominating Committee.

In regard to the growth of the Pioneer Association, Mr. Foscue said:

"Since last October we have organized the Texas Chapter, the Badger Chapter in Wisconsin and the Northwest Chapter made up of members in Idaho, Oregon and Washington. The organization of these Chapters met with hearty response from the eligible members in each of the territories embraced by these Chapters and all three of them along with the two Chapters previously formed, that is the Frank H. Woods Chapter of Lincoln, Nebraska, and the California Chapter, are all functioning perfectly. We now have underway the organization of a Chapter in Honolulu and our correspondence with Mr. Harrington of the Mutual Telephone Company of Honolulu, indicates that this Chapter when organized will have something more than a hundred members, practically all of whom will be new members to the Association."

Of particular interest was the announcement by Mr. Foscue that members of the executive committee in a meeting during August recommended a change in the by-laws and a reduction in the annual dues. Heretofore all members paid dues of $3 per year and were presented with a limited accident policy. The Executive Committee suggested the dues be dropped to $2 and the insurance policy be dropped. It was explained that executives of the insurance company handling these policies would be glad to handle direct those who wish to continue their insurance. This recommendation was later put to motion and a unanimous vote. Hereafter annual dues will amount to $2.

In paying his tribute to Mr. Johnston, Mr. Foscue said:

"I cannot close this report without paying tribute to tha grand man of Independent Telephony who was recognized last year by the United States Independent Telephone Association in being elected the first and to date the only Honorary member of that Association. That same man is the father of this Association, having organized it in 1920 and has nursed it through good times and hard times continuously and energetically through all these years. It has been my personal privilege of knowing J. K. Johnston for some twenty-odd years and have always admired him, but it has been only since I have become President of this Association that I have become fully aware of the fact that he is one of the finest characters that it has ever been my pleasure to know. He has worked with the new Board energetically and loyally, and had it not been for his full cooperation in all of the changes which we have made, your Association would not have reached the position it now occupies of embracing among its membership nearly all of the fine Pioneers of the Independent Industry of this Country:"

At a meeting of the board of directors, following the business meeting, Mr. Garland B. Foscue was reelected as president on a unanimous ballot. This is a signal honor for the Chicago pioneer telephone man and will insure a continuation of the active program instituted during his regime as its chieftain.

The new board of directors elected during the business session consists of Mr. Foscue, Walter Dakin, Madison, Wis.; J. K. Johnston, Indianapolis, Ind.; R. A. Lumpkin, Mattoon, Ill.; Kelley McNish, Bristol, Tenn.; Oscar Burton, Tyler, Tex.; R. C. Reno, R. W. Siemund and R. W. Smith, all of Chicago.

To serve with Mr. Foscue Mr. Siemund and Mr. Reno were named 1st and 2nd vice presidents respectively and Mr. Johnston and Julia Harmon, Indianapolis, were named secretary-treasurer and assistant secretary.

Mr. Mason's Address

(Continued from page 47)

truth, which is certainly being underscored enough by our bitter war experience. I am hopeful that the time is coming, in the near future, when the American people will refuse to be bribed with their own money in voting away their own liberties as individuals under the guise of a security that is not secure because it lacks a firm economic foundation.

In closing, I want to say that probably the most gratifying personal experience I have had as President of your organization has been the privilege of presiding over an industry during the very time when it showed its true blue colors in the fierce crucible of the fiery furnace of war. I refer specifically to the tangible evidence of gratitude and recognition which the Chief Signal Officer of the United States Army has so generously bestowed upon the various members of our Independent Telephone Association, including a number of our State Telephone Associations. These awards are essentially for giving telephone service above and beyond the call of duty.

The honor roll of these recipients of the certificate of award is too extensive and too well known to you to warrant my repeating at this time. I can only repeat my own feelings with regard to each and every one of these certificate awards, best summed up in the following remarks I made to Colonel S. W. Stanley of the Signal Corps when I accepted the award as President of our California Independent Telephone Association:

"This thoughtful action on the part of the Signal Corps in certifying to **our** cooperative spirit and effort—is evidence in itself of the splendid 'stuff' of which our armed services are made. **We** are the ones who should be granting awards to you **men** and **women** in uniform. You are sacrificing the comforts and liberties of home—and risking the battle line to bring victory to our Nation—and justice and peace to the world."

(END)

(Delivered by Mr. Mason at the USITA October Convention).

YORK INVESTMENT COMPANY

(A wholly-owned subsidiary of Theodore Gary and Company)

HUNTER L. GARY, *Chairman* — A. F. ADAMS, *President*

G. L. GRAWOLS, *Vice President* — E. C. BLOMEYER, *Vice President*

F. S. SPRING, *Treasurer*

A. E. CARLSON, *Secretary*

THIS COMPANY will purchase or arrange for the private purchase of securities of or make private loans to Independent telephone companies on reasonable terms, or will arrange credits for such companies, either small or large when needed for the purpose of postwar rehabilitation of plant or conversion of equipment or for additions or improvements.

Your inquiries are solicited and will be kept confidential if desired.

YORK INVESTMENT COMPANY

HEAD OFFICE: 1100 KING STREET, WILMINGTON 33, DELAWARE

"Goings On"

AT THE NATIONAL CAPITAL

By ROLAND C. DAVIES
Editor
Telecommunications Reports

From now until the national election, November 7, Washington affairs will be in a more confused status than ever—for the most part the doings in the National Capital will be "do-nothing" except that in the reconversion planning there may be a flood of governmental statements and ideas, some of which may stick but probably most will fall by the wayside after the ballots are counted.

The results of the Dewey-Roosevelt fight for the Presidency will have to be in before the policies of the Federal Government can be clearly demarked. Surplus property disposal policies, too, are up in the air because of the establishment of a three-member board to handle this task as the result of the Congressional legislation establishing a board instead of a single administrator. However, the present Administrator Will Clayton is remaining at the helm of the Surplus War Property Administration until the board members are selected. With this hiatus in the organization of the SWPA, its policies in making arrangements with manufacturers, including the telephone manufacturing industry, for the disposal of the war surpluses have to be held in abeyance.

Likewise, the setting up of the new reconversion agency, which was also authorized by Congress in the last month and became implemented into law by the President's signature during early October, is only of a temporary character. This new Office of War Mobilization and Reconversion is to be headed by OWM Director James F. Byrnes until after the election when a new appointee, probably Economic Stabilization Director Fred M. Vinson, is to take over. That the new OWMR agency will not get going with any speed under its temporary director Byrnes is evidenced by the fact that Justice Byrnes is now in France with General Marshall and General Eisenhower.

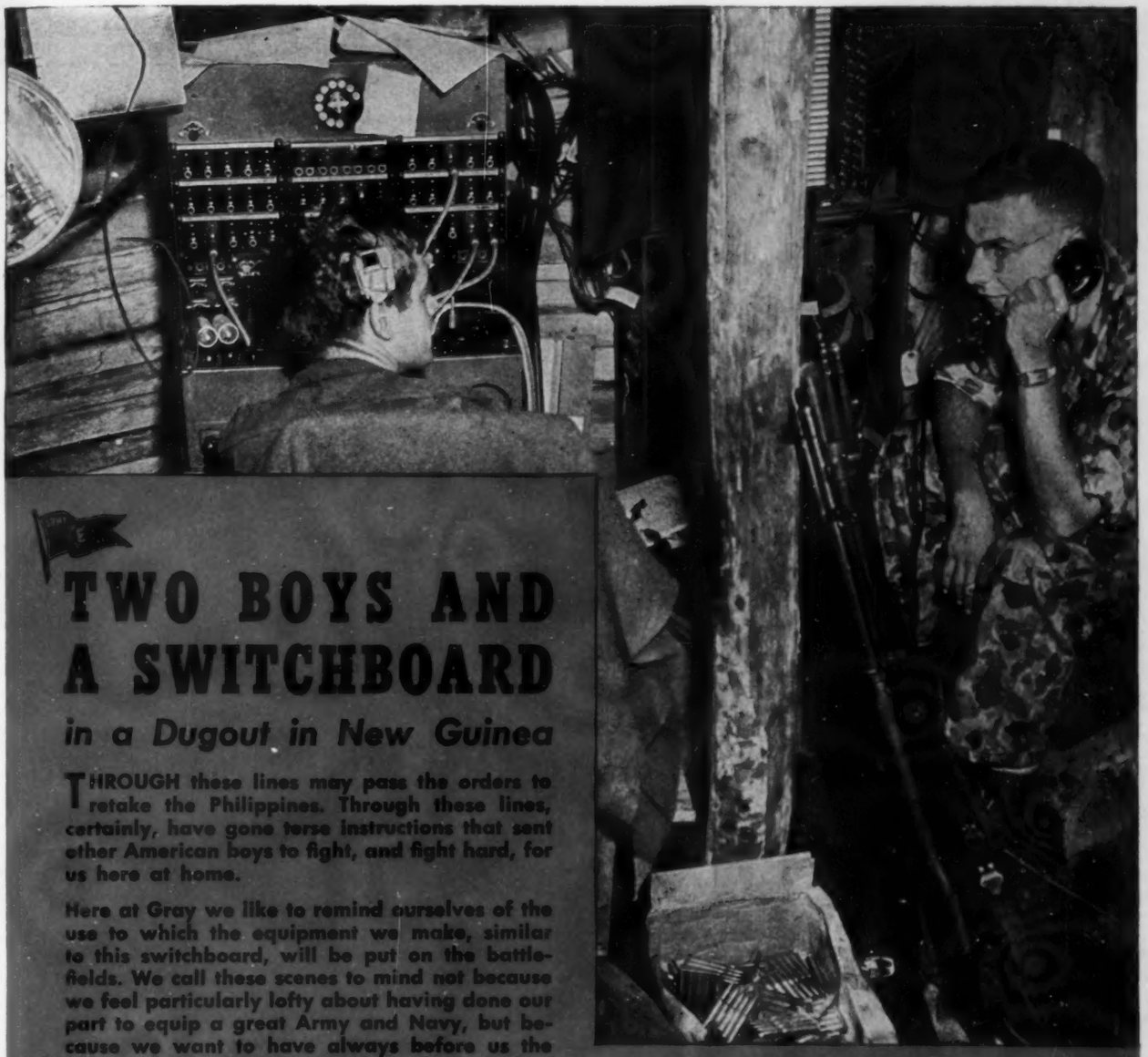
All of this adds up to this, in our opinion,—that American industry, especially the telephone industry, both manufacturing and operating, more than ever before must chart its own course of reconversion because the governmental policies are so muddled and upset. The War Production Board has recognized this fact and WPB Operations Vice Chairman Batcheller recently in a public statement emphasized that the Board would lean most heavily on the recommendations and viewpoints of the Industry Advisory Committees for guidance in the elimination and lifting of the wartime controls and limitations.

Shakeup at Federal Communications Commission

After the election will come the most important changes in the lineup of the FCC in its history since its creation in 1934. These shifts, likewise, will be dependent upon the outcome of the fourth term fight of President Roosevelt. And prognostications may be all wet in case of a victory by Governor Thomas E. Dewey.

Chairman James Lawrence Fly is leaving the FCC helm, no matter who wins the Presidency. Desirous of returning to private law practice because of its more lucrative rewards than government service, Chairman Fly is slated to leave the FCC by the end of November or during early December and it is reported that he has already engaged office space and an apartment in New York. The FCC chieftain, it is believed, desired to remain with the Commission until the current allocations program was well completed. It is understood that a main client of

H. P. Boswau, Lorain, Ohio, Roy W. Siemund, Chicago and R. E. Shotts, Columbus, Ohio, outside of sessions room during USITA convention.



TWO BOYS AND A SWITCHBOARD

in a Dugout in New Guinea

THROUGH these lines may pass the orders to retake the Philippines. Through these lines, certainly, have gone terse instructions that sent other American boys to fight, and fight hard, for us here at home.

Here at Gray we like to remind ourselves of the use to which the equipment we make, similar to this switchboard, will be put on the battlefields. We call these scenes to mind not because we feel particularly lofty about having done our part to equip a great Army and Navy, but because we want to have always before us the realization of what tremendous quantities of equipment are needed, and how little we can do, really, however hard we try, of the big job that still remains.

No calls from a Gray pay station will ever go through *this* board. But we know that by making such switchboards and other equipment we are adding just a little to the tremendous output of American industry which will help to bring back the day when companies like ours—and yours—can return to making for the free people of the world what they *want* to use, rather than what they *have* to use.

Official Photograph—U. S. Signal Corps

THE GRAY MANUFACTURING COMPANY

W. E. DITMARS, PRESIDENT

MAKERS OF TELEPHONE PAY STATIONS SINCE 1891

HARTFORD, CONNECTICUT : 230 PARK AVENUE, NEW YORK

Authorized Agents . . . Automatic Electric Sales Corp. • Graybar Electric Company • Kellogg Switchboard & Supply Company • Leich Sales Corporation • The North Electric Mfg. Co. Stromberg-Carlson Company • Automatic Electric (Canada), Limited • Northern Electric Co., Ltd.

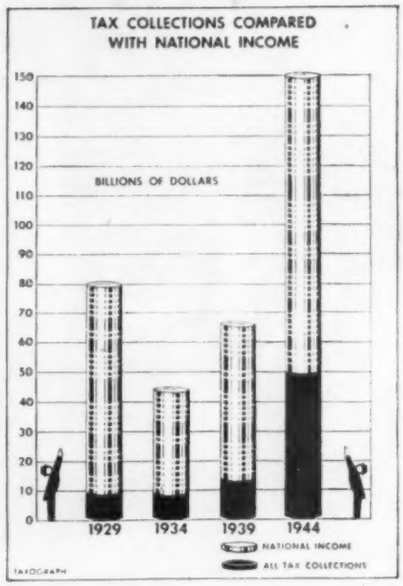
Chairman Fly will be the Muzak Corporation, which handles the distribution of wired radio programs to hotels and restaurants in a number of leading cities and is headed by William Benton, Vice President of Chicago University and head of the former leading advertising agency, Benton & Bowles, who is a close friend of the resigning Chairman.

The successor of Chairman Fly? The Nov. 7 election results will spell the story in this situation.

If President Roosevelt is reelected, there are two leading possibilities. Paul Porter, who has been the Director of Publicity for the Democratic National Committee and prior to entering government service during the war was Washington counsel for the Columbia Broadcasting System, is said to be a leading possibility for appointment to Chairman Fly's vacancy and to be named Commission Chairman—it is understood that he has the support of Mr. Fly. Another strong possibility for the FCC Chairmanship is Commissioner Clifford J. Durr. He would have the support of the New Deal wing of the Administration in the event of a fourth term victory. His selection would be of paramount significance to the Independent telephone industry because of his recent utterances on rural telephone expansion and his thought of a "Telephone REA."

However, if Governor Dewey is elected, both these selections would be out the window. In such an event, President Roosevelt would probably choose as Chairman Fly's successor, the Independent member of the Commission, Commissioner E. K. Jett. Or he might turn to a Republican such as Commissioner Norman S. Case, whose friendship with the President dates back to the days when Commissioner Case was Governor of Rhode Island and Mr. Roosevelt was Governor of New York.

For the other vacancy on the FCC, that of Commissioner T. A. M. Craven, a leading possibility is Leighton H. Peebles, Director of the WPB Communications Division whose selection would be a really merit appointment and one in the interest of good government. Mr. Peebles has had a lengthy career in the government since the early '30s with the Commerce Department, as NRA Deputy Administrator, with the Securities and Exchange Commission and, since the war, with the WPB. His selection, it is believed, would have the endorsement of leading officials of all government departments interested in communications.



Telephone Wages Become Important Issue; NFTW Urges Rise Above Little Steel Formula

The issue of wages for telephone workers is coming to the forefront in a most important way. The leading union in the field, the National Federation of Telephone Workers, joined with the other labor organizations—the AFL and CIO—in the recent hearings of the National War Labor Board in urging that the "Little Steel" formula be modified upward.

The NFTW presentation in the form of a letter to NWLB Chairman William H. Davis, emphasized that telephone workers are receiving "real" straight-line weekly income below that of 1940 and that as a class these workers have lost ground economically during the war. The NFTW stated that the figures on telephone wages which are available "indicate quite clearly that the telephone workers of the country have not received pay increases to enable them to keep pace with the increased cost of living."

The NFTW also is supporting the legislation which is now before Congress and may be the subject of a Senate Subcommittee hearing after the election to boost the minimum wage to 65 cents an hour. The telephone labor organization in its statement to the NWLB flayed particularly the wages for operators and assailed the pay scales of Independent companies especially. Because of these low wage rates, the NFTW claimed there is "a very large turnover" in the traffic departments of the telephone companies which has had the result of throwing a most substantial fraction of the total number of operators at or near the starting rates.

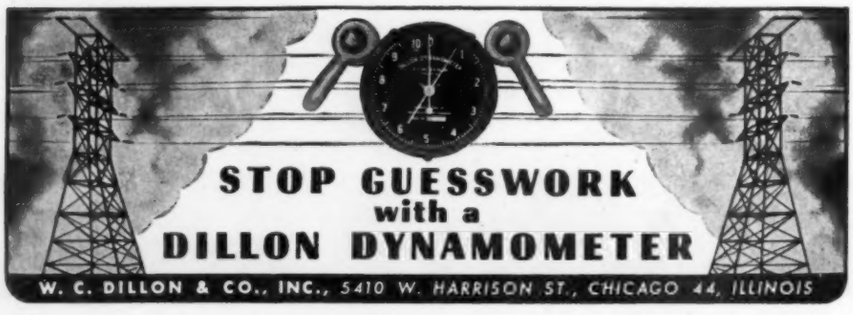
More than a score of wage increase disputes and adjustment cases are now pending before the National War Labor Board and its Regional units. Besides operators and plant workers, the NWLB through its Regional Board in New York recently ordered an increase for accounting employees, those of the New Jersey Bell, marking the first wage action in that field of workers in the telephone industry.

If the "Little Steel" formula is crapped by the War Labor Board, there will be a veritable flood of wage increase cases in the telephone industry, it has been indicated by the top officials of the NFTW.

Meanwhile, the Wage and Hour Division has recently handed down two rulings of importance for the smaller exchanges of the Independent industry, affecting the exchanges with less than 500 stations which are exempt from the provisions of minimum wages and maximum hours of the Fair Labor Standards Act of 1938.

In the posters of the Wage-Hour Division on the increase of the minimum wage to 45 cents an hour as was decided last July, that government agency authorized the smaller exchanges (less than 500 stations) to post an exemption notice on their bulletin boards, informing their switchboard operators that the minimum wage provisions did not apply to them. These exemption notices, it was ruled by the Wage-Hour Division, should be an attachment to the posters, proclaiming the increased minimum wage. The increased minimum wage has been in effect for all other telephone companies since last July 17.

As a result of a conference held with Wage-Hour Administrator Walling by the USITA, the Administrator ruled that for the exchanges of less than 500 stations the operators to be exempt from the minimum wage requirements may not perform more than 20 percent non-exempt work. Administrator Walling in his letter to USITA Executive Vice President Clyde S. Bailey stated that in computing



Electrical Weapons by the Maker of Bell Telephones

No. 2 of a series: *for the Navy*

One battleship needs as many telephones as a city of 10,000

When U. S. warships go into action, telephone equipment transmits orders instantly, clearly.

For the huge battleship "Wisconsin," Western Electric supplied two separate telephone systems using equipment designed by Bell Telephone Laboratories.

1. *Sound powered telephone system*—with 2200 instruments connecting all battle stations. These battle phones operate on current generated by *the speaker's voice*, so damage to the ship's electrical power supply cannot interrupt communications.
2. *Battle announcing system*—with 20 transmitter stations and over 300 loudspeakers which broadcast orders in a giant voice.

All this for just one battleship! Aircraft carriers, cruisers, destroyers, submarines, merchant ships too must have telephone equipment.

Today Western Electric—peacetime maker of telephones, switchboards and cable for the Bell System—is the *nation's largest producer of electronic and communications equipment* to aid our armed forces at sea, on land and in the air.

To speed Victory, buy War Bonds regularly—and hold on to them!

75TH ANNIVERSARY

Western Electric

IN PEACE...SOURCE OF SUPPLY FOR THE BELL SYSTEM.
IN WAR...ARSENAL OF COMMUNICATIONS EQUIPMENT.

Chairman Harold Bozell of the USITA Tax Committee and Advertising Committee Chairman R. A. Phillips flank our Washington Correspondent Roland C. Davies during USITA sessions.

non-exempt work the clerical work relative to noting long distance calls or telegrams is clearly part of the work customarily performed by a switchboard operator and thus is not included in computing non-exempt work. Likewise, he ruled so-called "secretarial services" performed by the operator for subscribers through the use of a switchboard or such work at the switchboard as making minor repairs, testing of lines with linemen, billing of customers and collection of bills from customers who call at the exchange be classed as non-exempt work. Mr. Walling noted that in exchanges of less than 500 stations, the operator is often the only representative of the telephone company on the premises. In the case of sales promotion or public relations work, soliciting new business, making of bank deposits or collection of bills at customers homes or offices, a determination of whether such activities should be considered as exempt or non--exempt work depends upon whether such work is customarily performed as a part of the duties of switchboard operators in exchanges of less than 500 stations.

"If it can be demonstrated," Mr. Walling's letter stated, "that it is the general practice in the industry for a switchboard operator in such an exchange to engage in sales promotion work or any other specific type of activity in question, then the performance of such work would be regarded as the performance of exempt work and not included in computing non-exempt work. Even if all such duties were determined to constitute non-exempt work, it appears rather unlikely that in the ordinary case the amount of such work performed by any individual operator would exceed the 20 percent tolerance for non-exempt work. Unless this tolerance were exceeded, the operator would come within the exemption."

Substantial Revisions of WPB Telephone Control and Limitation Orders

Final approval of the revisions of Orders U-2, U-3 and U-5 of the WPB Communications Division was in the making as TELEPHONE ENGINEER went to press. The armed services, however, had blocked the proposed revocation of WPB Order U-8 that limits the manufacture of telephones.

The major changes in U-2 which establishes the standards and procedures of operations for telephone communications were the deletion of all restrictions on replacements except those restrictions pertaining to replacement of interoffice communication systems with dial equipment and replacement of exchange manual central office equipment with dial equipment of more than 200 lines; deletion of all restrictions on additions of exchange central office equipment; and adoption of a revised WPB form to be used by doctors to certify persons who are entitled to telephone service because of illness. But the section of Order U-2 that designates the types of persons and title to preference for telephone service in accordance with the recommendations of the Telephone Operations Industry Advisory Committee, is slated for retention for several months after "Victory in Europe" Day.

In regard to U-3 which assigns AA-1 preference rating and the allotment number U-9 for deliveries of maintenance, repair and operating supplies to the telephone industry and restricts inventory and purchase, the revisions increased the amount of material that may be purchased for operating supplies from $2500 to $10,000 and eliminates the section of the order that necessitates listing of material for sale with the WPB. Another provision in U-3 relating to the amount of maintenance, repair and operating supplies material that can be purchased on a priority order was also eliminated. Another change was that the sales of material between operating companies can be consummated without a preference rating or allotment number. The provision requiring telephone operating companies to obtain authority to begin construction on projects in which the total cost of material is more than $5,000 is eliminated.

In the case of U-5 which restricts sale, purchase, rental or other commitment of wire communication equipment to orders rated AA-5 or better, the list of communication equipment, restricted by this order was reduced to the more important key items such as central office equipment, teletypewriters and cable. Deleted from the order was the requirement that manufacturers cannot accept orders unless they bear a preference rating of AA-5 or better—this means that operating companies can send in their orders to manufacturers and provide a backlog for later increased civilian production when the military requirements are lightened.

These revisions of the telephone limitation orders will considerably lighten the paper work and reports to the WPB from the teelphone industry, both operating and manufacturing.

This move is likewise helpful to the government agency, since Communications Division Director Leighton H. Peebles has recently lost about one-fourth of his staff through transfers to other government departments and resignations. These losses have included Deputy Director McNamara, who has returned to his professorship of electrical engineering on the Yale University faculty. A half dozen staff employees have gone to other departments, including the FEA Communications Section, Treasury Procurement Division and the French Purchasing Commission.

Independent Industry to Present Frequency Requirements to FCC

During the last week in October, spokesmen for the Independent telephone industry will present to the FCC the frequency requirements for the industry to be used particularly in furnishing short haul toll trunks, long haul toll trunks (involving repeater stations) and special rural telephone circuits. The rural radio telephone channels would embrace situations where radio might be advantageously used to bridge water gaps or to furnish service to farmers and ranchers located at too great distances from existing telephone lines to make it economically feasible to be served by wire. The frequencies which are requested by the Independent industry would be in the "lebensraum" in the spectrum above 300 megacycles.

The representatives of the Independent industry who are appearing before the FCC are B. C. Burden, former Engineer of the United States Independent Telephone Association, who is now en-

(Please turn to page 106)

STOP "Leap-Frog" Corrosion

"Leap-Frog" Corrosion damages underground pipes and cables.

Pipes or other metal structures are in places electro-positive in relation to the soil and due to natural galvanic action corrosion results. Metal is taken away from one section of pipe and deposited somewhere else along the exposed pipe.

By using Federal Cathodic Protection Rectifiers, "Leap-Frog" corrosion is foiled. On constant guard is a direct current charge which cancels the harmful electrolytic corrosive action on oil, gas and water pipelines and underground cables.

These Federal units have no moving parts, so they last indefinitely — with the absolute minimum of attention. In desert heat or torrid dampness they keep on the job day and night.

Proper engineering for the corrosion problem at hand calls for the specialized consulting engineering service which is yours — when you look to Federal. Write today for full details.

Federal Cathodic Protection Rectifier, Model FTR 5114-S. Output 20 amperes at 10 to 40 volts. Other sizes as required.

Federal Telephone and Radio Corporation

AN IT&T ASSOCIATE

Newark 1, N. J.

Report of the

USITA Advertising Committee

R. A. Phillips, Chairman

AT the time your Advertising Committee was appointed, the question that was proposed for its consideration was as follows:

"Can the USITA assist its members and the Independent Telephone Industry in procuring suitable advertising and publicity ideas and materials at a reasonable cost? If so, how?"

In our report to the Spring Conference during April of this year, we outlined in complete detail a suggested plan whereby the advertising and publicity needs of the Independent Telephone Industry could be economically served through the creation of the "Telephone Advertising Institute".

In order that the plan be successful and the "Institute" be in a position to render a comprehensive publicity service, it was recommended that at least seven hundred Independent telephone exchanges serving over five hundred stations should be obtained as subscribers to the "Institute" before the service was actually commenced. We are mighty happy to report today that seven hundred twelve Independent telenow subscribers to the "Institute's" services, and consequently the plan is in actual operation.

It will be the endeavor of the "Institute" to keep its services in tune with the times and the current problems of our Industry. While it is necessary today to explain shortages, it is entirely possible that tomorrow we will be selling more service, or perhaps be justifying upward revisions of our service rates. You will be interested to know that a sizeable group of representatives from our Industry have been invited to serve as a Copy Clinic Group to assist the "Institute" in keeping abreast of our business at all times. Meetings will be scheduled periodically at convenient points and invitations issued to the members of this Copy Group to attend. It is hoped that enough of the Group will be able to attend each time so that a complete discussion of the Industry's advertising needs and requirements can be had with the individuals responsible for the operations of the "Institute".

Mr. Sweeney, Cleveland, and F. R. McBerty, president of North Electric, were chatting when we snapped this flash.

Instead of further reviewing the details of the "Institute" plan, and in view of the fact that the "Institute" has representatives and a complete display of the type of materials that their service includes available at this series of meetings, it seems desirable at this time to consider the broader aspects of the subject of advertising.

Being fully aware that there had been previous unsuccessful efforts to obtain sufficient participation in a centralized advertising and publicity service to permit of a worthwhile and complete program, your Committee approached this assignment with considerable temerity. We were aware of indications that a great number of Independent Telephone people considered advertising as merely "just another way to spend money". A part of our Industry seemed to feel that advertising was all right for those selling toothpaste, or hair tonic, but that as far as our business was concerned an occasional ad in the daily or weekly newspaper—just enough to keep the local newspaper man satisfied and happy—was all the advertising and publicity needed.

THE operating reports of Independent Companies reflect this attitude. We find a business with an investment in excess of $750,000,000 and gross revenues exceeding $160,000,000, spending an almost negligible sum for

advertising or other types of publicity. This, then, is one attitude in regard to telephone company advertising. An attitude represented by an occasional and hurriedly prepared ad in the weekly or daily newspaper; a "thank-you" ad at Christmas time or a donation to the high school class year book—a view that advertising has as its objective that of satisfying the newspaper man himself or to occasionally sell an additional telephone. Advertising should be viewed in a much broader sense. Advertising should mean a well-planned and consistent publicity program so designed as to convince the public of the values of telephone service and create a sympathetic understanding of the principal problems incident to furnishing such service. Viewed in this light, advertising goes far and beyond the personal pleasure or displeasure of the newspaperman or the mere endeavor of selling additional service.

The war period that we are going through should be convincing enough that this broader view is a proper and worthy conception of advertising. We have lately been forced to practice an economy of scarcity. We just haven't had enough service to go around. It has been necessary to tell the public about this scarcity and explain the reason for it. This has had nothing to do with selling an additional telephone or pleasing a newspaperman, and yet, never before have we found a greater need for the use of advertising and worthwhile publicity.

The value of having the understanding of the public has been amply demonstrated during this period. We have experienced a far less number of complaints in regard to our service than we did prior to the war. The war itself has created a sympathetic understanding of our problem on the part of those we serve. Will our subscribers always be so patient and understanding? Any representative of the Telephone Industry that feels advertising has no place in our business certainly must believe that we do not have any problems, the solution of which will require the sympathy and understanding of the telephone subscriber.

We do have our problems—we will continue to have them, and it might be well to consider some of those that the "Telephone Advertising Institute" may be instrumental in helping to solve.

ONE problem that is inherent in our business is brought about by the fact that telephony is highly technical. The laymen can see nothing simple in the mechanics and

STROMBERG-CARLSON
RECOMMENDS—

Privacy and Comfort When Telephoning

The CHURCHILL
No. 100 Folding Door
TELEPHONE BOOTH

. . . will bring you new customers and insure the old ones returning. People enjoy the privacy and comfort afforded by the CHURCHILL Telephone Booth.

It is constructed as a single unit and equipped with a reinforced back panel for mounting a wall telephone or coin collector.

The CHURCHILL Booth is made of selected white oak and is available in light or medium oak in a satin finish.

Included as standard equipment are electric light and automatic electric ventilator.

Overall height is 84¾"; width, 29"; depth, 30½". Shipped knocked down and crated.

Illustrated literature available.

SUB-CYCLE

A Powerful RINGING CURRENT

. . . that meets the EXACTING REQUIREMENTS of your needs. SUB-CYCLE has proven its superiority under the most severe operating conditions because it has . . .

★ No Moving Parts
★ Requires No Routine Maintenance
★ Nothing to Lubricate
★ No Radio Reception Interference
★ Economical, Quiet Operation

To Suit Your Demands
6 Models

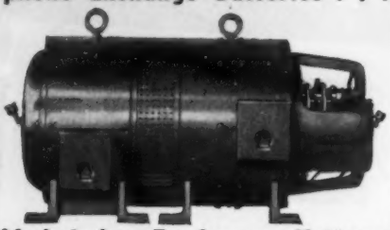
Ranging from an output of 7½—40/50 watts covering use with P.B.X.'s to large central offices.

"The Choice of the Telephone Industry"

STROMBERG-CARLSON COMPANY
Factory and General Offices: Rochester 3, New York, U. S. A.
Branch Offices: Chicago, Kansas City, San Francisco, Toronto

THE DIVERTER POLE MOTOR GENERATOR

Meeting Completely Every Requirement for Charging Telephone Exchange Batteries . . .



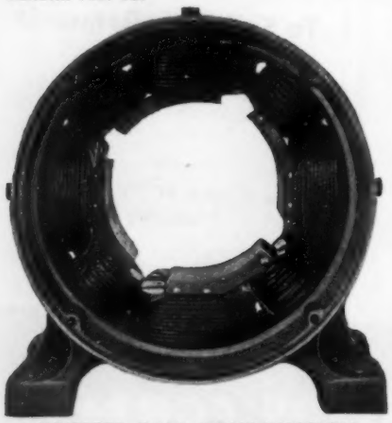
Maintains Exchange Voltage Within Desired Limits and Insures Automatically Controlled Floating Charge of Batteries—Day and Night.

Specially designed, carefully constructed, adjusted within precision limts and thoroughly tested in laboratory and field, the Diverter Pole Generator has the characteristics required to assure peak performance at all times in charging Telephone Exchange Batteries.

Some of these inherent characteristics are:

- Completely Automatic, it eliminates all manual attention to charging.
- It insures a continuous floating, constant charging voltage controlled within very close limits under all loads.
- By shifting all loads, beyond the safe capacity of the generator, to the battery it protects itself against any dangerous overloads.
- It is free from any characteristics of "running away" or reversal of polarity.
- It is electrically and mechanically quiet in operation reducing to a minimum frequencies and harmonics which might be objectionable on the lines.
- It is economical in operation and maintenance.

Proof of the dependability of the Diverter Pole Generator lies in the records of trouble-free highly efficient performance in hundreds of installations over a period of twenty years. For a safe, satisfactory, economical and trouble free charger of Telephone Exchange Batteries you'll find The Diverter Pole Generator unexcelled. It will pay you to investigate. Write today for Bulletin No. 96.



DIVERTER POLE CONSTRUCTION

The Electric Products Co.
1729 CLARKSTONE ROAD : CLEVELAND 12, OHIO

Leich Sales president Roy W. Siemund (left and reflection in mirror) have Lenz Electric's Ray Zender and Phillip Lenz as his guests after sessions.

equipment required to complete telephone conversations. Have you ever had the privilege of taking a subscriber through the Traffic Department of a telephone exchange where there are several girls working at a busy switchboard, each girl handling perhaps as many as two hundred fifty local calls per hour? Invariably when one of our customers has had this experience, they come away with a little better understanding of our business and some of its problems. It is hardly feasible to take all of our subscribers or prospective subscribers through our plants. Consistent and worth while advertising and publicity can be substituted for such effort and can help bring about a better appreciation on the part of the public for the Telephone Company and its problems. "Telephone Advertising Institute" can help interpret your very technical business in a manner the layman is better able to understand.

During the past three years we have had the most rapid station growth ever experienced in the history of the telephone business. A substantial increase in operating revenues has been incident to this station growth. An examination of the operating statements of Class "A" Independent Telephone Companies, which companies operate about one-half of the Independent Telephones in the United States, indicates that Independent Exchanges have at least $40,000,000 more annual revenues now than was available to them in the prewar year of 1940. Forty million dollars more income per year. Our operating expenses have materially increased since 1940 and there has been a floor established below which certain expenses cannot be reduced. The desirability and necessity of maintaining and holding as much of our present revenues is academic. Will we be able to hold them?

In a recent questionnaire circulated among Independent Telephone Companies by the USITA Post War Plans Committee, the question was asked as to whether or not they expected a loss or gain in stations after the war. A very high percentage of the Companies making reply indicated that they believed there would be a loss in stations. Many believe that as much as twenty-five percent to fifty percent of the stations added during the war will be removed when we again have peace. This sounds as if we will have a real job on our hands in holding our present revenues.

WHILE our customers have greater savings than at any time in previous history, they also have the greatest pent-up needs and demands for all kinds of services and products. We will meet very active competition for the customer's dollar. Millions of new autos, refrigerators, stoves, radios and many other items will be purchased. All of these items will provide active competition for the same kind of dollars that are required to pay telephone bills. There never was a time when our subscribers were more convinced that our service was worth every dollar they pay for it, but they will need to be continually reminded of the value they receive if we are to maintain anything like our present revenues. If we seriously want to avoid drastic shrinkage in gross income, it will require aggressive selling plans. The services of the "Telephone Advertising Institute" can furnish a solid foundation for such plans.

A great deal has been written and said in regard to the problems incident to the operation of the very small telephone exchange. A corollary to this problem is the fact that many farms of the nation are still without telephone service. Here is a challenge that should be of interest and concern to every one connected with the telephone business. Before the telephone requirements of all small exchange subscribers and all farmers can be satisfied, considerable additions to and improvements of the equipment now used in rendering such service will be required. Recently Commissioner Durr of the

Thomas Boyd, New York, and Frank Davies, California, were surprised that we did not ask for a smile in this one.

Federal Communications Commission said: "While the total number of telephones was increasing thirty-five percent, the number of telephones on farms was decreased forty percent. Three out of four of our farms—are without telephone service of any kind today. What shall we do about these stranded people of ours?"

A staff member of a public utility commission recently advanced the thought that it was entirely possible that the small telephone exchange and rural telephone service problem required some form of Government financing. Lowell Mellett, a newspaper columnist, whose writings reach a large circulation, in an article entitled "Phones for Farmers" has said: "In the matter of rural telephones, this country has been steadily slipping for more than twenty years. Surely something can be done and maybe R.E.A. has shown the way. The problem of rural telephones can be solved. A half century ago the Government made a radical departure in postal service by introducing rural free delivery. Ten years ago it moved in to meet the farmer's need for electricity. The same probably would be true if the Government were to lend a hand toward ending the farmer's telephonic isolation."

I well recall the advent of the Government financed Rural Electrification Administration. I am of the opinion that most progressive electric industry managements today recognize that had the private electric companies taken a more aggressive attitude toward providing electric service to the farmers, there would have been no need for such a Federal Agency as the R.E.A.

There may well be differences of opinion within our own Industry as to the advisability of a Government financed program to put a telephone in every village home and one on every farm. We can all agree, however, that if the American people are convinced that more and improved telephone service is required for our well-being such service will be provided by one means or another. In any such consideration our Industry has a very definite

STROMBERG-CARLSON
RECOMMENDS—

Crapo
STEEL STRAND

1—HIGH STRENGTH
2—RUGGEDNESS
3—LONG LIFE
4—ECONOMY

The superior tensile strength that only steel can give . . . . the ruggedness to withstand severe punishment . . . the ability to outlast normal needs . . . . all these are combined—with outstanding economy—in **Crapo** Galvanized Guy and Messenger Strand.

Long life and low maintenance costs are characteristic of this time-tested product. Heavy, ductile, tightly-adherent zinc coatings, applied by the **Crapo** Process, provide lasting protection against corrosion. The inherent strength and endurance of the steel makes for dependable, maintenance-free service.

Crapo Galvanized Products also include **Crapo** HTL-85 and HTL-135 High-tensile, Low-resistance Line Wire; E.B.B., B.B. and Steel Telephone Wire; Construction Wire; Tie Wire, and Ground Wire.

Are Your Lines SAFE?

When a pole goes down, the cost of pole and wire replacement go up.

The new DILLON BISECTOR will cut your chances of guying failures to the absolute minimum. **Without** the supervision of an engineer, a workman can **accurately** bisect the angles and spot anchors at the exact point where they will function at 100% efficiency.

S-I-M-P-L-I-C-I-T-Y
The Keynote of
the New DILLON BISECTOR

Easy to use—Rugged—Compact—Lightweight—No skill to operate—**Eliminates** tape lines or fancy figuring.

A QUALITY TOOL
With a Real Purpose

SAVE TIME—SAVE MONEY
SAVE SERVICE

USE THE DILLON BISECTOR

- NO CHARTS
- NO FIGURING
- NO MEASURING

STROMBERG-CARLSON COMPANY
Factory and General Offices: Rochester 3, New York, U. S. A.
Branch Offices: Chicago, Kansas City, San Francisco, Toronto

American Beauty

ELECTRIC SOLDERING IRONS

are sturdily built for the hard usage of industrial service. Have plug type tips and are constructed on the unit system with each vital part, such as heating element, easily removable and replaceable. In 5 sizes, from 50 watts to 550 watts.

●

TEMPERATURE REGULATING STAND

This is a thermostatically controlled device for the regulation of the temperature of an electric soldering iron. When placed on and connected to this stand, iron may be maintained at working temperature or through adjustment on bottom of stand at low or warm temperatures.

For further information or descriptive literature, write

AMERICAN ELECTRICAL HEATER COMPANY
DETROIT 2, MICH., U. S. A.

TELEPHONE ENGINEER'S Roy F. Smith and Don Sorenson have a get together with Raytheon's Ralph Ritter and Michigan Pole's C. F. Zagelmeier.

stake and interest. We will have views as to the soundest approach to the problem, and it is here again that we will need a good vehicle of expression for our ideas and wishes and the reasons for them. We will have a story to tell those most affected—the subscribers we serve and the subscribers that wish to be served. How better can we do it than through local use of well prepared, intelligent and persuasive publicity?

WE have touched on only a few of the matters in which good advertising and other publicity can play an important role by telling about our side of the business. Our technical business can be made more understandable, the use of our service can be expanded to our benefit, and a vehicle for presenting our views is available by use of the services of the "Telephone Advertising Institute". Why—every time a subscriber leaves a receiver off the hook, every time a subscriber gets a wrong number, every time we have a severe storm, an occasion is presented illustrating the need for our having public understanding. We would not think of leaving thousands of dollars of Central Office Equipment unprotected to save the cost of a few fuses. The cost of local advertising and other worthwhile publicity is just as small in relation to what it can be used to protect.

It will be the endeavor of the "Institute" to serve in such a manner that its services will be indispensable. The "Institute" can only make its services valuable and available. It will require alert, progressive management to use the service and bring its benefits to the Independent Telephone Industry.

A report of this Committee would not be complete without an expression of sincere appreciation and thanks to our two fine trade journals, TELEPHONE ENGINEER and Telephony, for the fine co-operation accorded the Committee in its work of establishing the "Institute." Mr. R. C. Reno and Mr. Ray Smith have not only given freely of their time as members of our Committee, but have also carefully reported the progress of the endeavor. Even the advertisements that they published calling attention to the availability of the "Institute's" services were contributed by these journals as a service to the Industry. Only through the co-operation of many has it been possible to make this low cost advertising plan available. We sincerely hope the plan will be of real service to our Industry.

Respectfully submitted,
R. A. Phillips, Chairman
V. B. Clark
H. F. McCulla
L. F. Roberts
V. E. Chaney
L. O. Evenson
R. C. Reno
R. W. Smith

Chambers Succumbs To Long Illness

Nicholville (N. Y.) Telephone Co.'s owner, Royal S. Chambers, died at the age of 72 on August 4, after a long illness. Mr. Chambers had been owner of the New York company since 1937.

His widow, one son, one daughter and two sisters survive him. The son, Lt. Royal S. Chambers, Jr., is public relations director with the 8th Service Command.

Telephone Company Executive Retires

C. R. Woods, assistant to the vice-president and general manager for the Indiana Bell Telephone Company, retired fom active duty August 1 after more than thirty-seven years of Bell System service. Mr. Woods started his telephone career in February, 1907, as an assistant traffic engineer for the Chicago Telephone Company.

25 YEARS AGO THIS MONTH

Taken from TELEPHONE ENGINEER files of October, 1919.

Eight irate Houston, Texas, business men protested to the courts, says October, 1919 TELEPHONE ENGINEER, that they had paid for front and back cover positions for their companies' advertising in that city's telephone directory, only to have the publishers of the book steal a march on them, and distribute free stiff cardboard covers for the books which, when slipped over them, succeeded in neatly burying the ads.

★

An article in October, 1919, TELEPHONE ENGINEER advocated choosing employees by test, rather than by the various "hit or miss" methods used by many companies which resulted, in many cases, in employees being unfit for the work at which they started, and frequently finding the type of occupation for which their abilities make them suitable only after a long period of "false starts."

The story contained a reproduction of a sample employment blank and cited various particular instances where the use of such a method of ascertaining not only the past experience, but also the likes and dislikes of prospective workers, had proved highly successful in personnel work.

★

A Kansas City, Mo., Chamber of Commerce committee, after making a thorough investigation of the advantages of automatic telephone systems, recommended without reservations that an automatic system be put into use in that city with as little delay as reasonably possible, and October, 1919's TELEPHONE ENGINEER, in a story on the subject, listed the specific reasons set forth by the committee for the superiority of automatic over manual systems.

★

Chicago Telephone Co. staged a garden contest in the company's main building, relates October, 1919, TELEPHONE ENGINEER, and the harvest which the contest disclosed included an amazing variety of "crops"—bees, corn, ducks, pumpkins and dandelion wine, to mention only a tantalizing few.

★

STROMBERG-CARLSON
RECOMMENDS—

GENUINE IRONITE DROP WIRE

A recognized leader for forty years, because of its strength . . . long-life . . . conductivity, and easy workability.

HEMINGRAYS SAVE MONEY

. . . because they outlive poles

Hemingrays are the result of a secret glass "batch-mix," the climax of 88 years experience, plus Owens-Illinois quality-controlled production. That is why Hemingrays are free of voids, stresses and strains . . . why sudden changes of temperature leave them unimpaired.

Hemingrays frequently outlive poles, hardware, and cross-arms and for that reason are easy on the operating budget.

Recommended for Rural Lines:

Hemingray all-purpose No. 16; Hemingray No. 42—its long leakage path keeps toll lines trouble-free; Hemingray No. 9—a drip point petticoat for fast moisture run-off.

STROMBERG-CARLSON COMPANY

Factory and General Offices: Rochester 3, New York, U. S. A.

Branch Offices: Chicago, Kansas City, San Francisco, Toronto

E. W. Olschner

Lightning Protection for Telephone Plant

By E. W. OLSCHNER,
Vice President and Chief Engineer, Carolina Telephone & Telegraph Company

THIS paper is prepared in two phases. The first phase covers the general characteristics of lightning and discusses the various protective devices commonly used on telephone plant and the function performed by each item of this protective equipment.

The second phase is more technical and discusses, in more detail, just what happens in the cable plant when struck by lightning. It also discusses some additional measures which have been tried in a limited number of cases and may be used in certain areas where excessive damage is being experienced.

In discussing this problem it seems desirable first to review briefly the operation of a thundercloud, its formation and characteristics, and as best we know, just what happens when a lightning discharge takes place.

Lightning—the ordinary lightning of a summer day—is an electronic phenomenon. The lightning flash occurs, of course, because cloud and earth have built up electrical charges, have arrived at what is in effect an abnormal condition which corrects itself in a violent and sudden manner.

In terms of electrons, a body is charged when it has either more electrons or less than the number normally corresponding to the atoms which compose it. In the normal atom the negative charge of electrons is equaled and neutralized by the positive electricity of the central nucleus. By various means, for example, frictionally close contact, this equality may be undone; then electrical forces are called into play, like electricities repelling while unlike attract. Always any excess of electrons in a body tends to pass to one with a deficiency. The greater the excess or deficiency the stronger the urge to balance the account.

That is the situation of earth and cloud before the lightning strikes. The discharge is an action of electrons, a readjustment in the location of electrons which is as natural as that of molecules of water flowing down a hill. Once the water gets to the top of a hill its tendency is to immediately run down to sea level, where no further fall is possible. In the course of its descent it converts its potential energy, that is, the energy inherent in its elevation, into kinetic energy and dissipates that energy of motion in overcoming obstacles en route or in striking a blow at the end of its path as does the falling water which hits the turbine blades in a hydro-electric plant. The readjustment must frequently await suitable conditions, just as water held behind a dam seeks its level only when the gates are opened or the dam breaks. While it waits its ability to work remains potential.

When cloud and earth are oppositely charged they constitute a system of potential energy, ready for conversion into kinetic energy in the form of moving electrons. Between is an atmosphere of air—and also, wandering freely and along through the relatively vast spaces between air and molecules, a few electrons. Of the air molecules almost all are normal, that is, uncharged. Some by the collection of wandering electrons may have become

In the Automatic Electric rooms we snapped A. O. Prest, J. H. Hazlett, Colonel J. C. Grable and Automatic's Chief Engineer K. W. Graybill.

negative; others by loss may become positively charged. In either case they should be called "ions," meaning "goers," for they are subject to electrical influence and will go toward charged bodies.

The free electrons move toward earth or cloud, whichever is positively charged. Their progress is necessarily impeded for they must dodge or jostle their way past the enormously more numerous neutral molecules which pursue only haphazard motions uninfluenced by cloud and earth.

This is the situation under which lightning occurs. As the charges on earth and cloud grow greater, or as the cloud swings nearer towards the earth, the acceleration of electrons is increased. A damaging collision may then occur in which an electron is knocked off from a neutral atom. The wrecked atom is thereby divided into a free electron and a positively charged atom. The latter does not limp away from the scene of the accident. It has become an "ion" by virtue of its unbalanced electrical condition. Subject now to electrical forces it starts off in the opposite direction from that taken by the free electrons; while the electron just freed joins the electronic parade.

TRAFFIC now becomes dangerous. With each collision other electrons and atoms are created. Their number grows with enormous rapidity. The normal condition of the atmosphere breaks down and, in almost no time, an enormous stream of electrons is set into motion. In other words, between cloud and earth there is a strong current of electricity. Along the path of this discharge the molecules are stirred by the plunging electrons into more violent haphazard motions. Their sudden increase in kinetic energy means a higher temperature and a rapid expansion of the local air. Through the adjacent atmosphere, therefore, spreads a pulse of compression, a crowding of molecule upon molecule, which is perceived as thunder by the ear.

During the sequence of acceleration, collision and ionization there is a net transfer of electrons from the negative body to the positive; and for both a neutralization of the charged condition. During this process, which is rapid and violent, the potential energy of the electrical system of cloud and earth is dissipated in heat, and to smaller extents in light and sound. Then ionization ceases, but recombination, that is—deionization, continues for a moment more, until finally the rent atmosphere returns to a normal condition.

STROMBERG-CARLSON
RECOMMENDS—

The DIAMOND C MEANS LESS POLE REPLACEMENT

COLFAX Creosoted Yellow Pine Poles are carefully graded according to physical properties desired and treated with 8 lbs., or more if you wish, of Grade No. 1 Creosote Oil in accordance with AWPA specifications.

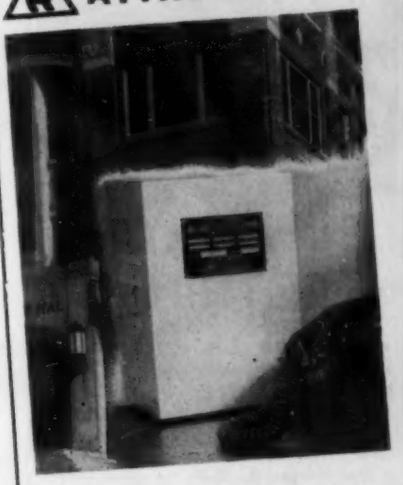
Each pole is treated full length under pressure with the finest and cleanest creosote oil obtainable.

Reduce losses in revenue due to pole failures—specify:

DIAMOND C
Creosoted Yellow Pine Poles

Mfd. by Colfax Lumber & Creosoting Company, Inc.

RAYTHEON



When life depends on uninterrupted telephone service

. . . Raytheon RectiFilteRs (battery eliminators)

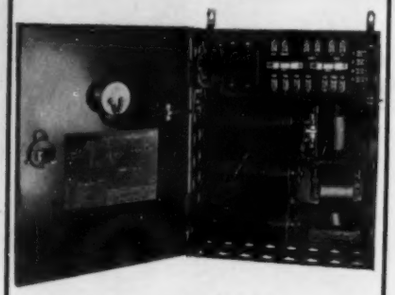
provide dependable power

Uninterrupted telephone service in hospitals is vital for protecting health and life. That is why so many hospital administration executives and telephone companies select Raytheon RectiFilteRs for the power supply. They know from experience that Raytheon RectiFilteRs always provide dependable power whether the traffic demands be light, normal or heavy. And because RectiFilteRs provide uniform D.C. output voltage, they assure proper operation of automatic telephones. Raytheon RectiFilteRs are entirely automatic in operation . . . they have no moving parts . . . and require no maintenance.

A complete bulletin showing the advantages of Raytheon RectiFilteRs is available on request. Write for a copy.

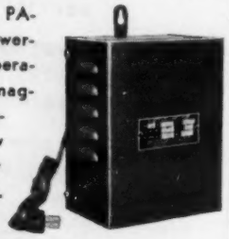
STROMBERG-CARLSON COMPANY
Factory and General Offices: Rochester 3, New York, U. S. A.
Branch Offices: Chicago, Kansas City, San Francisco, Toronto

REPLACE BATTERIES WITH



ELECTROX RECTIFIERS

- Electrox RA Battery Eliminator for all lamp signal and automatic switchboards.
- Provides constant, humless voltage output thru automatic magnetic regulator. No adjustments required. Plug in and forget it. Built to serve indefinitely.
- Individual units or complete sets for telephone, telegraph, signal service, etc.
- Electrox PA-05004 with power-off relay for operator's circuit on magneto switchboards. Low first cost; low operating cost.



KEEP YOUR BATTERIES UP *with*

- Electrox Battery Chargers—for trickle charging telephone batteries, or, (automatic), for exchange batteries.

See your jobber or distributor, or write direct to factory.

SCHAUER MACHINE COMPANY
2059 READING RD., CINCINNATI 2, OHIO

C. E. Jones, Erie, Pa. stands while Harlan Holmwood, Santa Monica, and James H. Rodger, the pole man of Minneapolis, pose for your Editor.

Most thunder does not reach the ear as a single crack because sound travels at a speed of only 1100 feet per second. For instance, one portion of a lightning discharge in the clouds may be three seconds away, while another portion of the stroke may be only one second away. Thus, the sound reaches the ear as a continuous rumble.

Probably the oldest protective device from lightning known to man is the lightning rod. It was invented and placed in service long before electric current was generated and transmitted for human use. For over a century lightning has been by-passed to ground by this means. Today these rods are a very serious business. When properly installed, they afford a high degree of protection and often save many times their cost in fire prevention alone. This is especially true in the open country since lightning is more likely to strike buildings there than in a city, since the exposure in the country is considerably greater.

Nearly two thousand people are killed or injured by lightning in the United States each year. Nine-tenths of these casualties occur in rural areas. However, not all lightning rods are installed in rural districts. Some are used in cities to protect fine trees or skyscrapers.

One fine example is the General Electric Building in New York, which is more than five hundred feet high. When this building was new it was struck and damaged several times. Investigation revealed that steel work had not been carried to the upper extremity of the tower and the top fifty feet of the building was brick with non-grounded reinforcing members. This problem was solved with a lightning rod system that conducts strokes harmlessly to ground through the network of steel in the building.

It is estimated that the damage to aerial telephone plant in the United States from lightning alone amounts to about three-quarters of a million dollars annually. In addition, of course, damage is caused by direct contact with power wires, power arc follow-up, etc. In order to protect the plant as best we can against these causes is the reason the various protective devices are used.

No doubt most of you are familiar, at least in a general way, with the various protective devices installed on telephone circuits. However, some of you may not be familiar with the functions of these devices.

THE three usual means of providing protection are the voltage discharge gap, commonly called "protector blocks," the fuse and the heat coil. The protector blocks protect the plant against excessive voltages and the fuse and heat coil protect the plant against excessive currents.

Visualize, if you please, a complete subscribers circuit beginning in the central office, through underground cable, through aerial cable, through open wire and finally through drop wire to the subscribers' station equipment. In the central office each wire is equipped with a voltage discharge gap and a heat coil, the heat coil being connected in the circuit on the office side of the discharge gap. At the junction of underground and aerial cable seven ampere fuses are placed in each wire unless equivalent protection is provided by fine gauge cable (24 gauge or smaller). At the junction of the aerial cable and open wire a voltage discharge gap is placed on each wire if the open wire is a half mile or more in length. If the open wire is less than a half mile in length, no voltage protection is usually provided at this point.

At the subscribers' station we have a fuse and a discharge gap, the fuse being on the **line** side of the carbon blocks.

The voltage discharge gap is an arrangement which, when connected to

A view of the Advertising Institute display at the USITA convention.

a telephone wire, provides a small air gap between the wire and ground. One of the blocks is of carbon and forms the ground electrode. The other is of porcelain with a small carbon insert. The carbon insert forms the line electrode and is so arranged that, when the two blocks are held together by a spring in the usual manner, a small air gap exists between the carbon block and the carbon insert. The carbon insert is held in place in the porcelain block by means of glass cement.

A ground on the telephone conductor is established when the voltage between the electrodes is sufficiently high to cause arcing across the gap. In some cases of severe discharge, enough carbon may be pulled from the blocks to span the gap and cause permanent grounding. Then, too, when the discharge is prolonged and the energy dissipated in the spark gap is high enough, the glass cement will soften and allow the carbon insert to be pushed against the carbon block by the supporting spring, thereby solidly grounding the telephone conductor.

At the central office and in the subscribers' station, the discharge gap is the so-called 350-volt protector. The air gap in these protectors is about three one-thousandths of an inch. On the average, this protector will operate at 350-volts peak and practically all will break down at voltages of 550 volts.

At the junction of the aerial cable and open wire, the discharge gap is the so-called 700-volt protector. The air gap, in this case, is about six one-thousandths of an inch. On the average this protector will operate at 700-volts peak and practically all will break down at 1050 volts.

There are two kinds of protective devices commonly used to protect the plant against excessive currents; the fuse, or small gauge cable, and the heat coil.

When the open space cutout breaks down under abnormal potential a current will exist in the telephone conductor. It is the function of the fuse to

STROMBERG-CARLSON
RECOMMENDS—

THE "RU" CABLE TERMINAL

The Reliable "RU" is a reversible unprotected cable terminal which has gained wide acceptance in the telephone field. The flat fanning plate in combination with a cover which surrounds the wires at the back creates an unusually weatherproof terminal. At the same time, this design gives linemen more convenient working space.

FEATURES

DETACHABLE MOUNTING BRACKET—simplifies installation.

CAST CABLE CHAMBER—will outlast the cable.

FLAT FANNING PLATE—simplifies wiring.

REVERSIBLE SLIDING COVER—protects terminal connections from weather and permits installation with stub at top or bottom.

Other features of importance contributing to the leadership of the reliable "RU" terminal are the gravity catches to hold its rugged zinc cover in raised position, guide rings for jumpers, molded bakelite face plate, beveled washers, perfect cable sealing nozzle, and bronze cover chain.

SIMPLIFY BILLING
with Subscribers Bills

Mfg. By:

Telephone Print Company

★ **Subscribers' Bills**—Printed to suit your company's requirements. Rental and toll receipts with or without stub; plain back or toll statements; toll statement run short or long way of bill, as desired. Stub is machine-perforated for better appearance. Loose, padded or bound in books of 100 each. Send sample of your present bill and state quantity desired.
★ **Billing Envelopes**—Cut-out small billing envelope for monthly statements. State quantity desired for quotation.

★ The Form T-111 Loose Leaf Subscribers' Ledger is becoming increasingly popular with operating companies. Names need be recorded only once every five years. Can be used for monthly or quarterly billing. Sheets may be taken out or added at will. Indexed if desired—alphabetically or numerically. Write for sample sheet and state quantity desired.

Printed Forms, Ledgers and Stationery for Telephone Companies. Samples on request.

STROMBERG-CARLSON — PROGRESS IN TELEPHONY

STROMBERG-CARLSON COMPANY
Factory and General Offices: Rochester 3, New York, U. S. A.
Branch Offices: Chicago, Kansas City, San Francisco, Toronto

Taken in one of the Kellogg. rooms. J. N. Cox is at the left. Kellogg's Texas representative Womack and Fred Trower of Corsicana, Texas are also acting surprised.

interrupt this current before overheating or damage occurs to the telephone plant. The fuse normally used for this purpose will carry seven amperes continuously and will operate in less than five minutes on a current of 10.5 amperes. It should be remembered **always** that the fuse is inserted in the circuit between the open space cutout and that part of the plant on which high voltages may be impressed. In this case, after the operation of the fuse, the open space cutout, together with the station or central office equipment associated with the circuit, are isolated from the source of high voltage.

No doubt many of you have sometimes noticed station protectors with fuses strapped out or not placed in the circuit on the **line** side of the voltage gap, and it can be readily seen that this practice presents a very hazardous situation on the subscribers premises, especially with respect to fire.

It might be interesting to know why seven amperes were selected as being the most suitable rating of the fuses used. For safety reasons the rating must be low enough so that fuse operation will take place before overheating of protector mountings or equipment can occur. On the other hand, it should be high enough so that the fuse will not operate on current values employed in constant current series street lighting circuits. It is characteristic of these lighting circuits that, when they are opened, a very high voltage tends to build up across the gap. If such a circuit comes in contact with a telephone conductor and is closed through the open space cutout and fuse, operation of the fuse might increase the voltage to such an extent that the fuse would arc over and thereby cause a fire. The usual current employed in series street lighting circuits is 6.6 amperes.

WHERE foreign voltages not high enough to cause protector operation are impressed on telephone circuits, the terminal equipment may provide the only path to ground the current. These currents are called "sneak currents" and although they are usually of small magnitude in certain cases they may, if allowed to continue, overlheat the equipment and associated wiring and constitute a fire hazard. It is the purpose of the heat coil to divert these currents to ground, before overheating occurs. The heat coil, in general use, will carry .35 ampere of current for three hours and will operate in about three minutes on .54 ampere. It consists essentially of a coil of fine wire around a tube in which a pin is soldered. When this coil is in the mounting, the coil of wire is in series with the telephone conductor. When the current in the coil heats the copper tube sufficiently to soften the solder, the pin, which is connected on the line side of the coil of wire, is grounded by the spring in the mounting, thus solidly grounding the telephone conductor.

Heat coils are not generally installed on toll circuits since, in general, the current that may exist in toll circuit equipment due to a voltage not high enough to operate the protector blocks is limited in magnitude by circuit impedances and by fuses in battery supply circuits to toll equipment.

The discussion of the second phase is based on a theoretical study of the various problems involved in lightning protection of aerial cable. It will be evident that there are many factors which affect the probability of damage to aerial cable. This is complicated further by the varying degree to which each of these factors comes into play, so that it is not possible to present very definite information on trouble expectancy.

The peak current in a lightning stroke as measured in numerous instances varies from zero to about 175,000 amperes with 50% of strokes exceeding 25,000 amperes, and about 20% of the strokes exceeding 50,000 amperes. Thus, if a cable could withstand 25,000 amperes and remedial measures were applied so that it could withstand 50,000 amperes, the number of failures would be reduced about 2.5 times.

Current measurements have indicated that the current usually reaches its crest value in about five to ten microseconds and that it decays to about half its crest value in from twenty-five to a hundred microseconds.

At a point remote from ground in an aerial cable the impedance to ground is about 200 ohms (400 in each direction). Since about 95% of all strokes have current in excess of 5,000 amperes, it can be seen that the voltage between sheath and ground is above 1,000,000 volts in 95% of the cases. The conductors within the cable are raised to approximately the same potential above ground as the sheath due to capacitive and inductive coupling between the sheath and conductors. There is, however, some difference in potential between sheath and core, due to the resistance drop along the cable sheath and it is this voltage that we are mainly concerned with so far as damage to the cable is concerned. The voltage between sheath and core is largest at the stroke point and diminishes as the distance from the stroke is increased. The smaller the cable the higher the sheath resistance, and therefore, the greater will be the voltage difference between sheath and core conductors, which accounts for the more frequent damage of small cables. Normal exchange cables are designed to withstand surge voltages from about 1200 to about 1500 volts.

WHEN the voltage near the stroke point exceeds the dielectric strength of the cable, puncturing will occur. When this occurs, one or more of the core conductors will then be in contact with the sheath near the stroke point. The voltage between these conductors in contact with the sheath and the sheath will then increase with distance along the sheath, the voltage at a given point being approximately equal to the resistance drop along the cable from the point of contact to the point under consideration. A maximum voltage, which is only slightly smaller than the voltage at the stroke point before breakdown, is reached some distance from the stroke point, and the voltage then slowly decreases beyond this point. This reasoning accounts for the fact that other punctures will ordinarily occur some distance away in either or both directions.

A voltage between the core and sheath sufficient to break down a cable may be developed either by (1) a large

Oklahoma Association secretary "Hube" Hubenthal and N. W. Rice, Ironton, Mo.

sheath current for a relatively short distance, (2) smaller current over a longer distance, or (3) a combination of (1) and (2) depending on ground paths from the sheath and their locations with respect to the sheath. The effect on the cable is quite different for cases (1) and (2). Where the current is large, and the distance short, permanent trouble will generally result because of a large transfer of current through the fault. On the other hand, where the sheath current is relatively small, and the distance long, permanent damage is unlikely, even though the voltage may be the same.

As mentioned before, the voltage to ground on an aerial cable during a stroke will, in most cases, exceed one million volts which will give rise to arcing for a distance of at least three feet. Therefore, even if guys are not bonded to the sheath, current discharge will occur between the sheath and guys for a considerable distance away.

For grounds of large dimensions, the resistance is fairly independent of the current. However, this is not the case for grounds consisting of one or a few ground rods or guy anchors. The resistance of such grounds **decreases** as the current increases due to the lowering of the soil resistivity, caused by ionization around the rods which means that grounds on the cable near the stroke are more effective in taking away lightning currents than is indicated by d.c. measurements.

Sheath grounds of large dimensions, such as underground dips, have a substantially lower resistance than guy anchors and ground rods. Because of this lower resistance, these good grounds will materially reduce the likelihood of lightning damage within a few hundred feet. However, when the stroke occurs some distance away and there is no intermediate low resistance ground, these dips may reduce the voltage between sheath and ground to such an extent as to prevent arcing from sheath to ground across the pole near the stroke. It will then have an adverse effect, because all of the current will flow along the sheath to the low resistance ground and give rise to a high voltage between core and sheath. Since this voltage is developed over a fairly short distance, permanent failure is likely to occur if the breakdown voltage of the core insulation is exceeded.

Remedial measures, such as pole protection wires and aerial or buried shield wires, may be applied in existing situations where severe lightning is experienced. Of the measures that may be applied externally, pole protection wires appear at this time to offer the best protection for a given expenditure. This practice has not been used as yet in my company, but plans are under way to have it installed in certain localities where extensive damage is being experienced.

POLE protection wires have been used in the past to protect poles against splintering. However, recent experience has indicated these wires, which consist of a wire bonded to the cable and extending from the top to bottom of the pole or to a point near

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O BE PUBLISHED JANUARY 15

e 1945 TELEPHONE "BLUE BOOK" and BUYER'S GUIDE ll be mailed as a part of the January 15, 1945 issue of ELEPHONE ENGINEER & MANAGEMENT. It will be the Oth annual issue of this "Handyman" for purchasers of tele- hone equipment and supplies . . . and with many new manu- cturers entering the field, the coming issue will be the largest er published.

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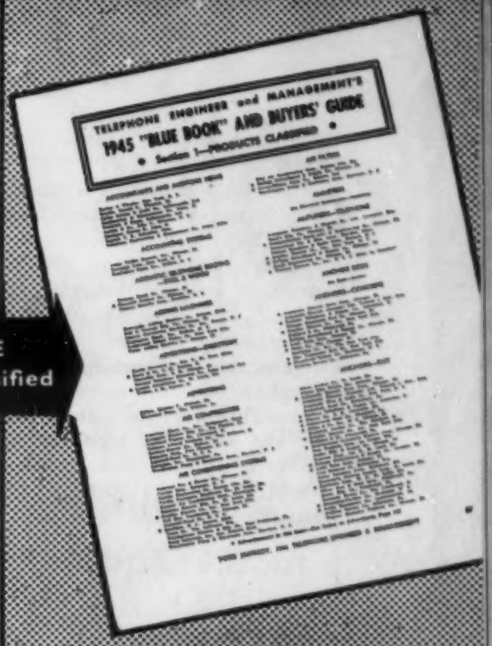

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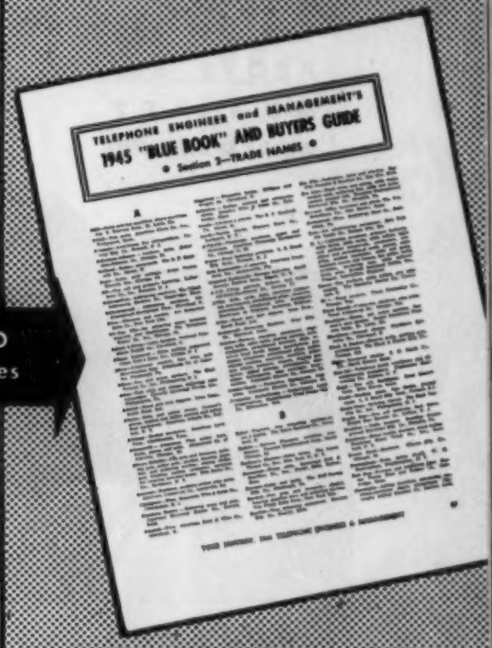

PART THREE
Manufacturers' Names

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the ground line, may also provide protection to aerial cables. The operation of this mechanism is quite complex. Numerous tests have been made by the Bell System along these lines and it was found, where pole protection wires are installed, that voltage between core and sheath becomes smaller as the number of grounds is increased up to about ten or fifteen, depending on the earth resistivity. Beyond this point the voltage between core and sheath is increased as the number of grounds is increased. This may be explained as follows. A low resistance ground placed on the sheath at a point where lightning strikes will considerably reduce the current along the sheath to a remote ground thereby reducing the voltage from core to sheath. If a sufficient number of grounds were to be placed on the sheath at the point of stroke, the voltage could theoretically be reduced to any desired value. This large number of grounds may be obtained by increasing the number of pole protection wires. These grounds will, however, be spread along the cable so that considerable current will be carried by the sheath to reach them. This current will give rise to a voltage between sheath and core due to the resistance drop between the point of stroke and point of auxiliary ground, and as the number of grounds is further increased, this voltage will finally exceed the voltage reduction due to increasing the number of grounds and, therefore, the voltage from sheath to core will increase as additional pole protection wires are added.

However, by the use of a gap of the proper length in the pole protection wires, the number of conducting grounds may be limited to an optimum value since a given voltage will arc over a limited number of gaps. For instance, in an area where the ground resistivity is 100 meter-ohms, the stroke current is 100,000 amperes, and a twelve inch gap is used arcing across the gap would be expected to occur at five or ten poles, depending on the breakdown of the soil. In this case the voltage from core to sheath of a full size cable would be about 1600 volts as compared to 2300 volts if no gaps were used, or about 3000 volts if no pole protection wires were installed. The optimum gap length for a low earth resistivity (100 meter-ohms or less) area is about twelve inches and about twenty-four to thirty-six inches for high earth resistivity areas. In areas where a wire fence is in the vicinity of the pole protection wire the fence should be regarded as ground and the gap in the pole protection wire should be placed above the top wire of the fence.

While guys provide sheath grounds in much the same manner as pole protection wires, the number of guys is comparatively small and gaps in them do not seem justified at this time.

Additional protection can also be provided by the addition of aerial or buried shield wires. This is especially true for the small cables. For instance, with a cable one inch in diameter a shield factor of .63 is obtained by the use of one shield wire or about .48 by the use of two shield wires. However, this method of protecting the plant is rather expensive, and not too attractive at this time.

It might be mentioned, however, that when an aerial cable is installed under existing open wire line having ten or more wires, this open wire line will provide considerable shielding. In case of a lightning stroke to one of the wires, a very high potential is developed between it and other wires, as well as to the sheath. Arcing will generally take place and the current will divide among the various paths, the other wires taking the somewhat larger share. The inductance of a cable sheath about 1.5 inches in diameter is about the same as two adjacent

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open wires in parallel so that for a twenty wire lead the sheath current will be about ten percent of the total stroke current, which would necessarily have to be handled in the absence of the open wire.

Due credit is given the engineers of the General Electric Company and the Bell System from whose papers most of this data has been obtained.

(This paper was prepared and delivered by Mr. Olschner at the Plant Conference of the USITA).

Sell Midwest Telephone Company

During September a deal was closed by which the Midwest Telephone Co. exchanges were purchased by the Central west Telephone Co. The deal involved the Volin, Flyger, Davis and Monroe, S. Dakota, exchanges.

Seven years ago the Midwest Telephone Co. became the owner of these four exchanges, purchasing them from the Central West Co., which had acquired a large number of exchanges in this and other sections of the country. The Midwest Telephone Co. was owned by Wm. Ramlet of Hurley, who has operated these four exchanges until their disposal in the deal of last week.

The Central West Telephone Co. is controlled by L. J. Ollig of Waverly, Minn., and this company owns and operates around forty exchanges in South Dakota and Minnesota, including Wakonda, Irene and Dell Rapids in South Dakota. This company has no connection with the Central West Co. which owned the Volin exchange before it was purchased by the Midwest Telephone Co.

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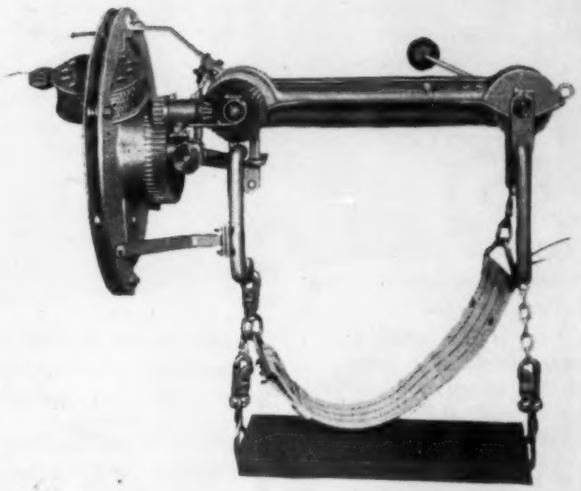

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Direction No. 1

WPB Order U-3

— ISSUED SEPT. 25 —

The WPB Office of War Utilities under Directions issued in connection with Orders U-3 and U-4 will no longer issue specific controlled material allotments to telephone and telegraph operating companies but will assign the blanket allotment number U-2 in future authorization on Form WPB-2774. Telephone and telegraph companies are therefore authorized, an administrative letter to the industry from Communications Division Director Leighton H. Peebles stated, to discontinue filling out Section IV of WPB-2774 regardless of the size of controlled material requirements.

Under the Direction I to Order U-3 for the telephone industry and to Order U-4 for the telegraph industry, operating companies hereafter may use the blanket allotment procedure and the allotment number U-2 for all controlled material requirements previously authorized on Form WPB-2774 regardless of quantity.

The text of Direction 1 to Order U-3 follows:

Part 4501—Communications

[Utilities Order U-3, as Amended Sept. 25, 1944, Direction 1]

Direction 1 to Utilities Order U-3 is hereby amended to read as follows:

(a) **What this direction does.** This direction makes applicable the simplified procedures provided for in the June 1944 revision of application Form WPB-2774 to all authorizations on WPB-2774 issued to telephone operators whether before or since June 10, 1944, even though such authorizations made allotments of controlled materials for specific quantities and quarters, and regardless of the size of such allotments.

(b) **Provisions applicable only to WPB-2774 authorizations in effect on June 10, 1944.** The following special provisions are hereby made applicable to all WPB-2774 authorizations issued to telephone operators and in effect on June 10, 1944, even though contrary provisions appear on the face of such authorizations:

(1) The applicant may use for the job authorized in his approved WPB-2774 application only materials and equipment of the kind, type, size and capacity listed in section III of his application and approved by the War Production Board, but he may use such materials and equipment in quantities required, irrespective of the quantities authorized on WPB-2774. No change may be made in the kind, type, size, and capacity of the materials and equipment listed in section III of the application and approved by the War Production Board, unless an amendment is filed and specific approval obtained. Nor may more materials and equipment be used than are required for the construction or installation authorized.

(2) The applicant is authorized to use the abbreviated allotment number U-2 for the purchase of controlled materials and Class A products to the extent authorized for use by paragraph (b) (1), above.

(3) The applicant is hereby authorized to use the preference rating(s) assigned in his approved application for the purchase of quantities of equipment and materials (other than controlled materials) additional to those rated for purchase in the approved application, to the extent that such additional quantities are authorized for use by paragraph (b) (1), above.

(4) The provisions of this paragraph (b) do not apply to authorizations which were revoked or on which all authorized work was completed prior to July 31, 1944, the effective date of the previous Direction 1 to Order U-3. Nor do such provisions set aside or supersede any specific exceptions or conditions which were made in the blank space below section V of any approved WPB-2774 application.

(5) References herein to "section III" and "section V" of Form WPB-2774 may be considered to mean "section C" and "section E" respectively, on an edition of Form WPB-2774 prior to that of February 21, 1944.

(c) **Provisions applicable only to WPB-2774 authorizations issued since June 10, 1944.** Operators may use the abbreviated allotment number U-2 for the purchase of all controlled materials and Class A products authorized for use in paragraph 1 of section 5 of WPB-2774 authorizations issued since June 10, 1944, irrespective of quantities of controlled materials allotted in section IV of such authorizations and quarters for which such allotments were made. Other provisions of WPB-2774 authorizations issued since June 10, 1944, are not affected by this direction.

(d) **Provisions applicable to all WPB-2774 authorizations issued prior to the effective date of this amendment.** (1) Operators are hereby authorized without making a formal return to the War Production Board, to cancel on their books controlled materials balances remaining from specific allotments.

(2) The abbreviated allotment number and preference rating(s) assigned herein may not be used to order materials and equipment available in the applicant's inventory in excess of a practical working minimum. The allotment number and preference rating(s) may be used to replace materials and equipment in inventory, but only to the extent that inventory has been reduced below a practical working minimum.

(3) The abbreviated allotment number and preference rating(s) assigned herein must not be used to order materials and equipment earlier or in greater quantity than is required for the construction or installation authorized.

(4) Orders for controlled materials placed pursuant to this direction must show the abbreviated allotment number U-2 and must specify the month in which delivery is requested. Orders for Class A products shall be placed as provided in Direction 4, CMP Regulation 6. Orders for materials and equipment, other than controlled materials, to which the preference rating(s) assigned herein are applied must also show the abbreviated allotment number U-2 for identification purposes.

Issued this 25th day of September 1944.

WAR PRODUCTION BOARD,
By J. Joseph Whelan,
Recording Secretary

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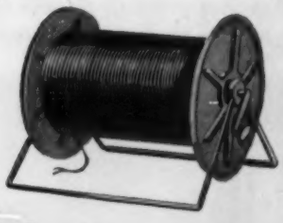

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By CARL I. WHEAT

Discussion on Tax Problems

The paper we are reproducing here was delivered by Carl I. Wheat, Esq., Washington, D. C. It was prepared for the Tax Committee Report under Chairman Harold V. Bozell for presentation at the USITA.

A FEW weeks ago I was asked to appear before the Railroad Commission of California—(I'm one of its old-home-town boys)— to discuss the appropriate treatment of excess profits and other Federal income taxes in wartime rate-making. What I shall have to say today will be in part a resume of that discussion and in part an outline of certain additional considerations which seem especially pertinent at this time. My California argument was offered on behalf of the Southern California Gas Company, and on the same day your President, Mr. Charles F. Mason, presented to the Commission certain highly important phases of this problem, from the standpoint of a practical operator, while Mr. Harold V. Bozell, of your Association, had appeared in the same proceeding at an earlier hearing and had testified most convincingly. I shall try today to be brief, and it must of course be understood that my remarks represent my own personal views, and therefore do not necessarily reflect the attitude toward these matters of all of those whom I have had the pleasure of representing in other connections in this field of enterprise.

This problem of the proper rate treatment of wartime taxes is not new. It cropped up during World War I, and though the United States Supreme Court fully clarified the issue in the interim, it was probably inevitable for the issue to arise again, now that war taxes once more form so large a factor in the lives of everyone. Indeed, just at this moment there is almost a nationwide rash of commission proceedings and other discussions involving this matter. Obviously, it is high time to face the problem squarely, with a view not only to the law but also to the economics that may be involved. Let us first consider the legal aspects.

Leich's Roy W. Siemund and Fred Strasser, Lincoln, Nebr. were enjoying a get together when we snapped this picture.

During World War I the then relatively new Federal income taxes were raised to hitherto unheard of levels and a tax called an "excess profits tax" was superimposed upon these higher income taxes. At that time no authoritative ruling had yet been made by the higher courts in respect to the relation of income taxes to public utility rates, and many persons in the regulatory field then held the view that such taxes were—as they said—"a charge on the stockholders and not on the ratepayers." With the enactment of wartime tax legislation and the heavy advance in tax rates, the issue took on new and enlarged importance, and many commissions, including particularly that of California, formally held that such taxes were not to be included among public utility operating expense allowances in the establishment of rates. Indeed, this became for a time almost the general rule.

IN 1922, however, the issue finally reached the United States Supreme Court in the **Galveston Electric Company** rate case, and that court—in an opinion written by Mr. Justice Brandeis —spoke unequivocally and with finality in disapproval of the philosophy of refusing full allowance of Federal income taxes, along with all other taxes, as operating expenses, to be recognized and included as such in public utility rate fixation.

In the Galveston case, which involved streetcar fares, the Master to whom

the case was first assigned had allowed, but the lower court had disallowed, as operating expenses the sum paid in 1920 as Federal income taxes under the wartime tax Act of the preceding year. In other words, the court was there dealing with the precise statute on which the various commission tax disallowances to which I have already referred were based, and the court declared:

"In calculating whether the five cent fare will yield a proper return, it is necessary to deduct from gross revenue the expenses and charges; **and all taxes which would be payable if a fair return were earned are appropriate deductions. There is no difference in this respect between state and federal taxes or between income taxes and others." (Galveston Electric Co. v. City of Galveston, 258 U. S. 388, at 399.)**

SINCE the date of that decision the United States Supreme Court, the lower Federal courts, the courts of the various states and the ratemaking bodies of both the states and the nation have unanimously followed the principle thus so clearly and authoritatively outlined by Justice Brandeis. (That is, they did until a few seem to have broken away since the current issue arose.) Shortly after the ruling in the Galveston case, the Federal District Court for the District of Indiana, in a proceeding involving a telephone company, disclosed how sound was that ruling when it quoted the following cogent analysis from the report of the Master to whom the matter had been assigned:

"It is said by the Commission that the reason for deducting as an operating expense, the Federal income tax paid by the company, is that 'it is a burden on the stockholders and not on the ratepayer. **It is obviously impossible that this item should be considered as any other than a necessary expense in the operation of the company.** It cannot be distinguished as an operating expense deductible for the purpose of arriving at net income in calculating the fair return —on any different ground from state taxes. [p. 487.]

"The utility is at the service of the ratepayer and among the other items which are necessary expenses of providing the utility and the service, is the item of Federal and state taxes. Unless the utility receives over and above this burden of taxation, a fair return, it is deprived of its property without just compensation and not only the public service corporation but the public served is in-

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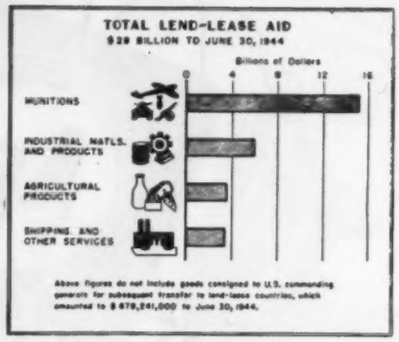
jured; for the necessary capital will not be attracted to the business. [pp. 487-488.[

"'. . . It does not appear to the Master that in arriving at net income for the purpose of ascertaining the rate of return upon the fair valuation of the property, used and useful of a public utility, if the income tax be deducted as an expense, it would have the effect to create a more favored class out of public utility concerns, so as to allow them to receive their eight percent free of income tax, while all other persons in the vicinity who receive the same percent have to pay it.' Most of 'the other persons in the vicinity' are adding their income **and excess profits tax** to the cost of their products, and the ultimate consumer is paying the tax. Every merchant and manufacturer is doing this." (p. 489; **Home Telephone and Telegraph Co.** v. **Public Service Commission,** P. U. R. 1922-B, 478.

WE might well add that if any such businessman did not do this,—if he did not earn enough to do this very thing from the prices received for his products,—he would go broke


TOTAL LEND-LEASE AID
$28 BILLION TO JUNE 30, 1944
Billions of Dollars
0
4
8
12
16
MUNITIONS
INDUSTRIAL MATLS. AND PRODUCTS
AGRICULTURAL PRODUCTS
SHIPPING AND OTHER SERVICES
Above figures do not include goods consigned to U.S. commanding generals for subsequent transfer to lend-lease countries, which amounted to $ 670,241,000 to June 30, 1944.

fast. The same is true of public utilities. Nothing could be more axiomatic.

If, therefore, the taxes now under consideration by various commissions are in fact income taxes, there seems to be little that can be said on the law side against the propriety—indeed, the necessity—for their inclusion as operating expenses in public utility rate establishment. True, they are high, but they are no higher than those applicable to other types of business, and there is no difference between public utilities and airplane makers or department stores in this regard. Of course, it is possible that it is the very high level of these taxes that has tempted certain persons to seize upon them as if they were ripe plums, to be picked off while the picking is good. No other explanation seems tenable with respect to the apparently anomalous attitude being taken on this subject by representatives of the Federal Office of Price Administration, by certain farm and labor organizations, and by at least some Commission people, whose viewpoint on this issue seems short-sighted, to say the least.

AT the recent California Commission hearing Mr. Thomas Tarleau, formerly of the Treasury Department, testified as to the nature of these taxes. He had assisted in drafting the Bills under which they are imposed, and he unhesitatingly declared it to be his view that there is no difference in kind between the income taxes of past years and those of today, the difference being solely one of tax levels. As to the so-called "excess profits tax," which some seem to consider a tax on "unreasonable" or "improper" profits, Mr. Tarleau testified that this tax was enacted **to raise revenue,** the term "excess" at no time during the consideration of the Bill having been argued or deemed to signify anything invidious. Of special importance is the fact that the level of

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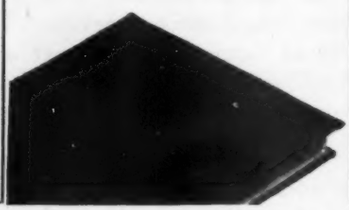

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By ARTHUR L. ALBERT
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earnings at which this tax commences to apply is not determined in the manner in which a rate base is determined for a utility, and Mr. Tarleau urged that since the tax consequences of otherwise proper **ratemaking follow automatically,** they should not be determinative from any sound viewpoint on the ratemaking process. They follow from other facts and are not themselves decisive of the issue of increasing or decreasing rates. This, thought he, was exactly what Secretary of the Treasury Morgenthau meant when he issued a recent statement on this subject, and Mr. Tarleau continued:

"If, in order to have a fair return to the investor and keep prices fair to the consumer, it means an adjustment in which excess profits will be lost [to the Federal government], certainly the Commission cannot do anything but its bounden duty to reduce rates. At the same time the fact that you won't pay excess profits taxes should not likewise prevent you from reducing rates. The excess profits taxes themselves have been a factor which has nothing to do with the ultimate result, so far as I see, of the return to the investor."

AND finally, Mr. Tarleau said that if, in working on these Bills, he had realized that this issue would arise, he would have tried to devise a better term than "excess profits" for this tax. But the idea never occurred to him, and he testified that he felt sure that Congress, in enacting this statute, entertained no intent to impinge on utility rates. Indeed, he felt that its members would be the most surprised of all if they were now to be told that they had been, in effect, regulating utility rates when they passed this legislation.

But, some have said, the excess profits tax is really an "avoidable" expense and should therefore be "avoided," in the interest of the ratepayers. This issue arose in the recent **Detroit Edison Company** case, in which the Michigan Commission at first held the matter beyond its jurisdiction. The State Supreme Court, however, held that the Commission should consider the issue but said that the fact "that such profits exist may or may not demonstrate that the earnings of the utility are excessive," adding:

"The Commission should not require the utility corporation to reduce its rates for the period during which it has paid excess profits taxes, nor for a period during which it may be liable for such payment on accrued taxes. **It should take into consideration the usual elements of rate determination** as well as obsolescence

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Most of these millions of messages go through all right but sometimes the Long Distance lines to war-busy centers get crowded. Then the Long Distance operator may ask your help by saying — "Please limit your call to 5 minutes."

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and depreciation of capital assets due to any extraordinary situations arising out of war conditions such as the effect of unusual and heavy war time loads . . . The public should not be required to pay rates that will yield an extraordinary profit to the utility **and the stockholders of the utility on the other hand are at all times entitled to a fair return on their investment."**

THE ordinary and usual principles of ratemaking were thus held to apply in such a case,—which is certainly as it should be. But the court hinted that excess profits taxes were somehow "avoidable" and therefore to be considered by the Commission, though it of course understood that such taxes are only "avoidable" as the result of rate reductions, and it certainly did not deem the mere "avoidability" of a tax the sole test of its propriety or impropriety as an operating expense, since it did not urge the obviously logical but highly absurd conclusion that all income taxes should be "avoided" by the simple expedient of reducing net income to zero. In fact, the court—as I see it—fully recognized that a decrease of taxes should not be deemed the primary aim in such a situation, but that such result is rather a by-product of fixing rates at reasonable levels. For this reason the court sent the matter back to the Commission for further proceedings.

Of special importance is the fact that when the issue thus came for a second time before the Commission, it did not act to reduce the company's rates by excluding excess profits taxes from operating expenses. In fact, it took a wholly different tack. On careful examination of the company's operations, it found that the company had set up as a postwar reserve around $1,500,000 more than seemed to it to be needed for that purpose. It therefore calculated that in order to reduce the company's net revenues by that amount, a gross reduction of some $10,450,000 in consumer rates should be required, recalling that out of every seven dollars taken from gross revenues the Treasury's take would be reduced by six dollars and the company's net income by one dollar. On the basic tax issue, however, it declared significantly:

> "The Commission finds nothing in its review of the remanded case to justify the contention that all excess profits, or war taxes, should be wiped out arbitrarily. The question of whether all excess profits or war taxes should be channeled away from the U. S. Treasury arbitrarily when war production is largely producing those taxes, is of debatable equity. Should such a practice become general it would appear that eventually greatly additional burdens would have to fall on individual taxpayers."

Plastic Wire's Herb Farr (center) and Commercial Cord's Ellis Weld in deep discussion.

THIS case is now pending once more in the courts, but the net result so far seems to be disapproval of the argument that Federal excess profits taxes or any other income taxes should be diallowed **per se** as operat- expenses. And the Michigan Supreme Court rightly recognized that a public utility must be allowed a residual fair return, regardless of the tax situation, and that the fundamental principles of ratemaking economics still govern.

I shall not dilate on those principles, save to say that it has long been the law that the return to be allowed a utility must "be reasonably sufficient to assure confidence in the financial soundness of the utility, and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties." This was the United States Supreme Court's ruling in the well-known **Bluefield Waterworks** case a score of years ago. It is a cold question of economic fact, and this very year the United States Supreme Court, in the much discussed **Hope Natural Gas Company** case, reaffirmed this salutary doctrine, remarking upon the necessary balance that must be reached between investor and consumer interests, and adding that the return, after fixed charges,

> "should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital."

HOW does this affect the allowance or disallowance of wartime taxes—as such—as operating expenses? It seems to me that it fully disposes of that issue. The dollars earned by a public utility do not come into the company's till in different colors, some to take care of the purchase of gas or oil or pencils, some to pay for labor, some to cover taxes and some to become return. They are all the same kind of dollars, and if some have to be paid out for taxes, including every kind and type of Federal tax, there will be just so many less dollars left in the till, in the final analysis, to pay for labor and materials and to take care of those capital costs which must come out of "return" in order to maintain the company's credit position and to render certain its ability properly and effectively to perform its public functions. Unless this residuum of adequate return is provided, service will assuredly suffer and the enterprise will inevitably fall. To deny or ignore this economic and financial axiom, and to say that the stockholders of a utility corporation, contrary to the necessary practices of every other sort of corporation, must shoulder this tax burden through reduced net earnings or disallowance of taxes as operating expenses is merely to bury one's head in sand.

If, therefore, upon usual and ordinary principles of ratemaking, a utility is found by a regulatory commission to be earning more than a fair and reasonable return, over and above its operating expenses, depreciation and taxes, the fact that tax savings will result from a reduction of its net return to more reasonable levels should not deter the regulatory body from performing its duty. But the mere fact that large tax expense is incidentally involved, although the residuary return is still no more than fair and reasonable, seems to afford no proper springboard for rate reductions, aimed at such taxes—as such—and of course incidentally harmful to the return which the utility must earn in order to carry on effectively its service to its patrons.

It has been suggested that, since the utility does not in any event retain excess profits tax moneys, a reduction in its gross revenues by the amount of such taxes would do it little harm, but would operate merely to transfer these dollars to the pockets of its consumers. In theory, this is of course correct, and as between the utility and its customers such action might be an expedient,—provided we were to eliminate Uncle Sam from consideration. Of course, the tax is not 100% but rather 85½%, and the 14½ cent pieces thus purposely left to the company must not be overlooked. They are a part

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of the earnings on which judgment as to the fairness of its return is to be exercised.

In this connection I desire to point out two other highly pertinent factors. One is that we must somehow pay for this war, and if a given utility's rates have not been increased during the war, **on a unit of service basis,** the Federal war income and excess profits taxes obtained by Uncle Sam from such a concern are in a sense "painless taxes," so far as the users of the service are concerned. They will a least **help** to pay for this war.

WE should not overlook the fact that—as the Michigan Commission stated in the recent Detroit Edison case—"The question of whether all excess profits or war taxes should be channeled away from the U. S. Treasury arbitrarily when war production is largely producing those taxes is of debatable equity." For example, a study of the sources of increased wartime revenues recently made by one leading Independent telephone company discloses that only 20% of such increase has come from exchange services, the balance, or 80% of the total, having arisen wholly from toll service. Indeed, the local grocer, the laundryman, or the individual residence subscriber seems to have contributed relatively little to these increased revenues upon which the excess profits tax accrues. On the other hand, by far the greater part of the increase arises directly from necessary toll calls made by those larger corporate subscribers which are engaged in war production. And, of course, the expense of such calls is being largely borne indirectly by the very government which is taking back most of these increases in earnings in the form of war taxes. Under such circumstances, it would indeed seem to be "of debatable equity" to deprive Uncle Sam of such taxes and instead to offer these sums by way of rate reductions to the general run of subscribers who have contributed only slightly, if at all, to the increases in revenue which give rise to the tax liability. And this is especially true since in most instances exchange rates rest today on the same levels that prevailed before these revenue increases from such war business began to accrue.

Moreover, we all know that it is much easier to reduce rates than to obtain authority to increase them. Even if we should wish to provide some method of giving consumers the benefit of such so-called "avoidable" tax savings, therefore, it would seem highly advisable to accomplish this end in some manner other than by the reduction of existing rates, as such. In this connection, one alternative method that has apparently found favor in some instances has been to grant to customers a refund or rebate just before the close of the year to which the tax items are applicable, based on estimates of excess profits taxes which otherwise would become payable in respect to that year. By this means the customers obtain the benefit, but the integrity of the Company's rate structure is maintained, so that when revenues go down after the war the enterprise will not be left stranded, with the necessity of increasing its rates and with all the administratve difficulties which that process entails staring it in the face. In other words, if we are in fact convinced, in some particular instance, that such action is fair to Uncle Sam, this is apparently how it can be done with the least hazard to the integrity of the utility's rate structure and general status. Of course, great care must be taken, in making the tax estimates, not to provide for refunds to consumers which will exceed the tax reductions which will follow such gross revenue reduction. From all viewpoints, it would seem better to err on the side of conservation in such a procedure, and obviously it may be 1946 before a given company will know accurately what its 1944 excess profits tax may actually be.

FINALLY, the integrity of a rate structure is something not to be dealt with lightly, and every effort should be made to preserve it against the necessities of the lean years that may be ahead. Since taxes are exactly the same as any other necessary operating expenses, so far as the treasury of a utility is concerned, it seems highly important from all viewpoints to preserve the fundamental economics of this issue from short-sighted or unreasoning attack. Unless a utility—after paying out its taxes of every kind and description—remains in a position to attract new capital at fair cost, it cannot be expected effectively to continue to perform its services to its patrons. Come what may, therefore, this minimum of residuary earning must be preserved, and to accomplish this is as much the function and responsibilty of the regulatory bodies as it is of the management of utilities whose rates they regulate. The mere fact that wartime taxes are high should not be allowed to blind the eyes of anyone to the basic economic fact that unless such essential costs are fully covered by earnings, no public utility—nor any other business—can long maintain its financial integrity. The World War I notion that such taxes are "a charge on the stockholders and not on the rate payers" is as opposed to sound economics as the Supreme Court has ruled it to be contrary to law. (*Delivered before the Tax Panel Discussion of the USITA* 1944 *Convention.*)

Son of FCC Commissioner Killed in Action

First Lieutenant John W. Case, Field Artillery, with the 29th Division, the son of FCC Commissioner Norman S. Case, died from wounds received in action in France Sept. 19. His parents were notified by the War Department Oct. 4 that he had given his life in the service of his country.

McClusky Family Solves Manpower Problem

William and Catherine McClusky, owners and managers of The Citizen's Telephone Co., Rock Creek, Ohio, are mighty proud, and justifiably so, of their sons, Tom, 14, and Dick, 11, pictured on the telephone pole. Mrs. McClusky tells us that "the two boys set this pole in our yard, between the house and their tent. They had lights, telephone and a special buzzer in the tent. All the work they did themselves." The boys' father says not to find fault with the wires on the pole as they were put there by the two youngsters.

According to Mr. McClusky, who has owned the company for seven years, he decided one day when he was fishing to buy himself a telephone company. He hadn't had a bite for hours, and had plenty of time to do a

Tom and Dick McClusky

lot of thinking, and he finally came to the conclusion that by owning a telephone company, he could stop "wasting my life working for someone else."

Besides Tom and Dick, the McCluskys have another son, James, 12, and a daughter, Alice, 17, and together the six McCluskys take care of all the work entailed in operating the Citizen's company, which serves 270 subscribers. No operators are necessary because their switchboard is tied in with the Ashtabula, Ohio, office and is automatic.

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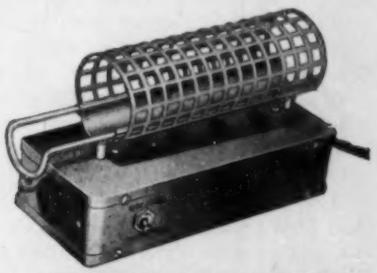

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Personalities IN THE NEWS

W. H. Dean, president of the Oregon-Washington Telephone Co., Hood River, Ore., and **J. W. Baker** of the Interstate Telephone Co., Spokane, were in attendance at the convention and greeting old friends. **Mr. Dean** brought the regrets of **D. O. Hood,** president of the Oregon Independent Telephone Assn., who was unable to attend.

●

Pete Winemiller, the Stromberg-Carlson man from Dallas, Texas, enjoyed a thrilling surprise while attending the Chicago convention. His son, **Captain Perry Winemiller** of the Army Air Corps flew in with a crew of twelve and was able to pay a pop call on his Dad at the Stevens Hotel.

●

The Texas delegation included **Mr. and Mrs. Oscar Burton** and son, **Morris,** and his wife, **Tyler, Sam Shutt and G. B.Foscue, Jr., Fred Trower** of Corciana and **Gertrude Tucker** of Austin.

●

John H. Wright, president of the Jamestown (N.Y.) Telephone Corporation, attended the convention and was introducing his bride to his many friends. Mr. Wright is an active member of the Civil Air Patrol.

●

The **Black** brothers, **Arthur O.** and **Willis,** of the Peoples Telephone Corporation, Butler, Pa., represented their company and attended all sessions. Arthur heads up the company.

●

G. Fred Switzer, president of the Harrisonburg Mutual Telephone Co., brought a group of his company employes to attend the various sessions and conferences during the national convention. We enjoyed meeting **Miss Elizabeth Dulls,** editor of their company magazine. Their picture appears in this issue.

W. J. Smith, general manager of the Northern Indiana Telephone Co., North Manchester, was one of those whose picture was left on the cutting room floor. Your Editor, who was doubling as a photographer at the convention, admits that quite a number of our shots did not turn out so well.

●

S. E. Wright, of National Telephone Supply, gave us our best study in photos.

S. E. "Stew" Wright of the National Telephone Supply Co., Cleveland, was one of the busiest of the manufacturers attending the USITA meeting. We finally halted him long enough and posed him in a soft chair, with the resulting picture you see above.

●

Ben Johnson of the Oliver Iron & Steel Co., Pittsburgh, Pa., was unable to be present and had their western sales manager, **Frank Cooke,** substitute for him.

Carl D. Brorein, Chairman of the USITA Telegraph Committee, and his entire Committee met during the Convention and presented their report "hot off the griddle." This report was a very important one and is being reproduced in this issue.

●

B. C. Burden, former USITA Engineer and familiar to our readers as our former Technical Editor, was one of the principal speakers at the Plant Conference with a subject of much importance to our industry. He reported on the future that radio might play in our industry. We will reproduce his address in a coming issue of Fortnightly as it is of much importance to the small companies. That issue reaches ALL of the telephone companies in the United States.

●

Messrs. Phillips and **Dally** of the Central Telephone Corporation, Sioux Falls, S. Dak., greeted your Editor and welcomed us to South Dakota on our recent visit to see if the stories on pheasant hunting we have been reading about were true. We found they were and hereby release the above gentlemen from their promise to let us hunt in their back yard if we were unsuccessful in the field.

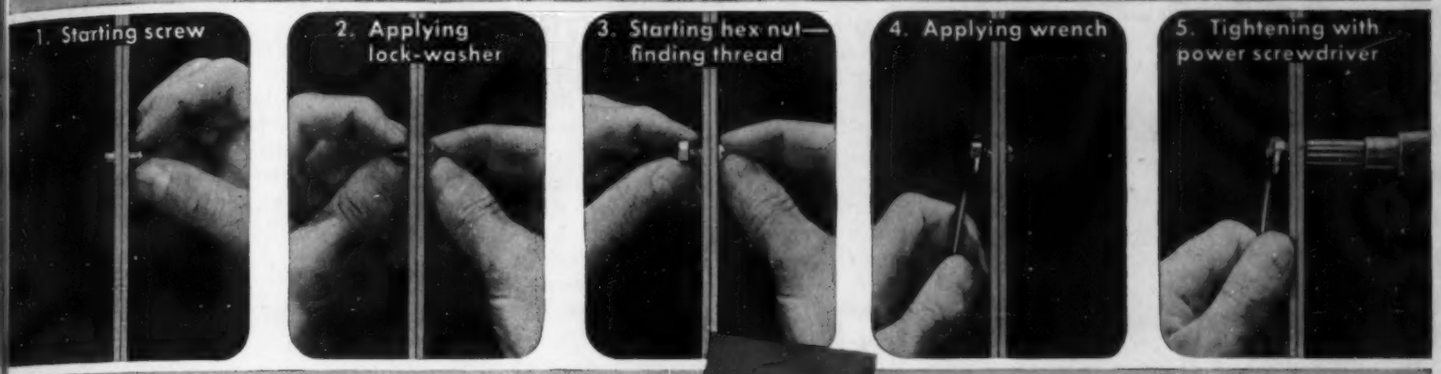
●

We nominate for due acclaim the cast of the Traffic Conference dramatization that served as the Committee report to the Annual Convention. They were: **George W. Rose, J. F. Haven** and **Mrs. Margaret Cone** all of Tarboro, N. C.; **Mona Lamb,** Muskegon, Mich.; **Josephine Schlaefer,** Rockford, Ill.; **George A. Henterseher,** Springfield, Ill., and **J. J. Gompers,** Columbus, Ohio.

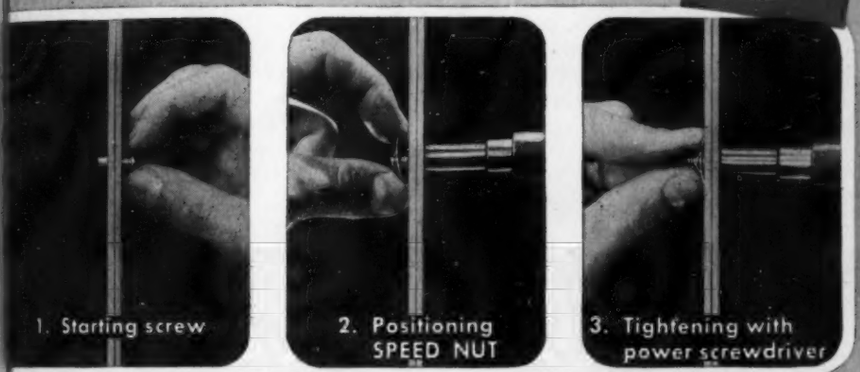
●

W. C. Dillon, Chicago manufacturer

Which is Better?



THE OLD WAY WITH 5 HAND OPERATIONS



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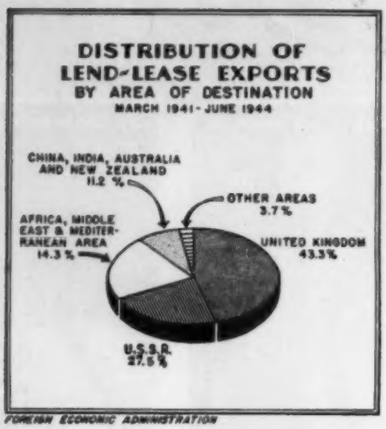
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and one of our oldest pioneer telephone men, was seen at the Convention in company with his six sons. All of them are active in the operation of his enterprises.

•

Thanks to the **Messrs. Hepner** and **Snyder** of the Buckeye Telephone Supply for their recovery of our flash bulbs lost by your Editor and photographer. We pictured **Mr. Hepner** while he was signing up an order. It seemed like old times.

Get in the Scrap With
SCRAP PAPER

Annual Statistics of Communications Industry

"Statistics of the Communications Industry in the United States", the FCC annual publication for the year ended December 31, 1942, will be available for sale shortly at the Government Printing Office, the FCC announced Aug. 21.

The publication will contain facts compiled from the monthly and annual reports of the telephone, telegraph cable and radiotelegraph carriers and holding companies and will also include considerable financial and operating data relating to standard broadcast stations and networks.

The delay in its issuance occurred as a result of war conditions, the FCC said.

Eggerss Named by Lincoln Co.

C. A. Eggerss was named manager of the telephone exchange at the Lincoln Army Air Field by H. F. McCulla, general commercial superintendent of the Lincoln Telephone and Telegraph Company, in an announcement recently. In this capacity Mr. Eggerss will have charge of telephone operations at the Lincoln Army Air Field. He succeeds Claude W. Helm, who has been appointed area commercial manager of the company at York.

Mr. Eggerss is well qualified by long and varied experience to assume his added responsibilities. He was employed with the company as groundman at Hastings in April, 1926, was made combinationman at that exchange in December, 1929, and in February, 1934 was promoted to district clerk for the district manager at Hastings. In June, 1941 he was transferred to the Lincoln business office as commercial representative, where he handled commercial service and credit operations until the appointment to his present position.

Ohio Contract Agent Retires With 45-Year Record

Allen W. Surrell, general contract agent for the Ohio Bell Telephone Co., who has handled for 22 years the company's relations and contacts with the more than 200 Ohio Independent telephone companies and with other concerns having contracts for telephone service, has retired under the 65-year Pension Plan. Mr. Surrell, who started his telephone career as a night toll operator, had served 45 years in the telephone business. He served with the A. T. & T. toll service, the U. S. Telephone Co., the Central Home Telephone Co. and the Home Telephone Co. of Dayton before the organization of the Ohio Bell. He became general contract agent in 1931.

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Are You A Telephone "Getme"?

There is nothing exclusive about the "Getmes."

They range from the big executive who picks up the telephone and says: "Get me the White House" to the fellew who says: "Get me my wife."

It seldom occurs to a "Getme" that he'd get his wife, or his business associate, or the White House quicker if he'd handle the call himself.

Why, sometimes after the call is put through, "Mr. Getme's" own operator or secretary has to send out a searching party to find "Mr. Getme."

Yet "Mr. Getme" would be very peeved if a fellow "Getme" had called him and then wasn't available when he answered the telephone.

"Mr. Getme" would say that someone was wasting a lot of valuable time.

"Mr. Getme" would say that his fellow "Getme" was tying up telephones in two offices and was generally slowing up two businesses at a time when no business can afford to slow up.

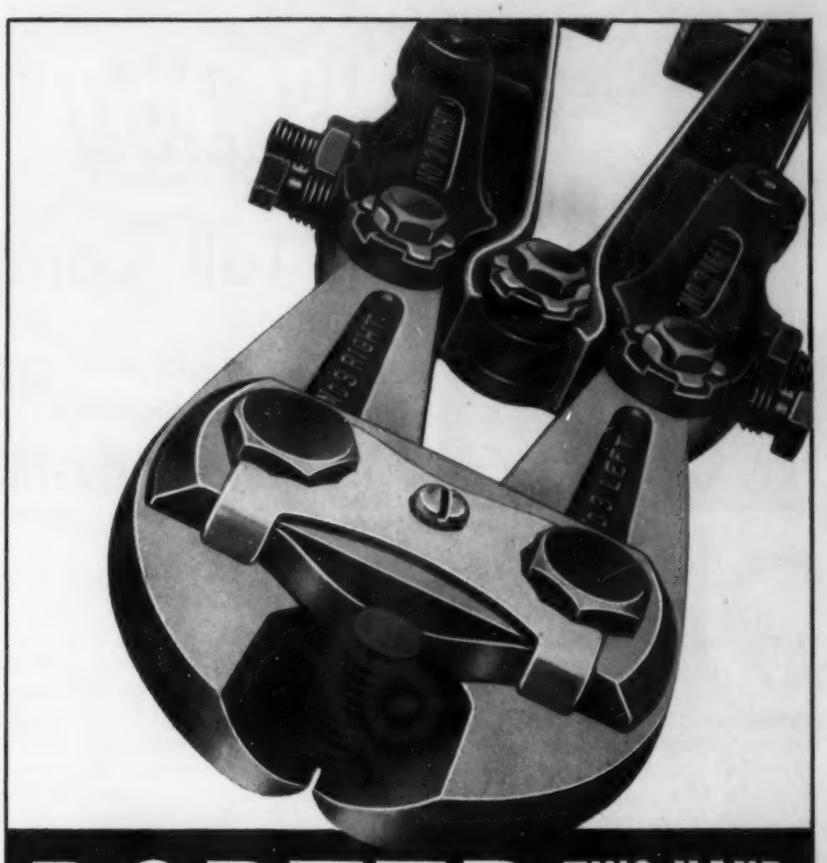
If "Mr. Getme" knew about the shortage of telephone equipment, and about how vital telephone service is to the war effort, "Mr. Getme" might become even more indignant.

He might even begin a campaign to outlaw the telephone "Getmes" in his own organization.

Railroads Entire Line Has Carrier System

Claiming that it is the first railroad to place its dispatching and controls entirely under radio-carrier induction telephone communications with the use of wires, the Kansas City Southern Railway announced recently that through the Aircraft Accessories Corporation it has equipped its entire 560-mile main line with this system. This, the railroad stated, enables the engineer and conductor to talk with each other on moving trains and with dispatching towers.

As announced by the railroad and Aircraft Accessories Corp., a weak radio wave is sent on the telephone and telegraph wires parallelling the tracks and has a communication range of 40 miles in bad weather and 125 miles under good atmospheric conditions. The KCS railroad has been testing the system for 8 months and has contracted to purchase a substantial amount of equipment for 17 transmitting and receiving stations along its lines.



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PORTER HKP CUTTERS

Edwin M. Blakeslee, Chairman

Report of Toll Compensation and Settlements Committee

MR. President, members and friends of Independent Telephony—This convention, in the advance notices thereof, was publicized as a "War Conference." Acting on that suggestion, therefore, your committee, in meeting assembled in Kansas City, Missouri, on September 12-14, 1944, at which, I am happy to report to you, all members were present, prepared for you its report of its activity and progress for the year in such fashion that it could, so to speak, be delivered to you in machine gun bursts, that is, each matter treated is dealt with directly and briefly so that you may take notes for your own guidance on the subjects discussed. I give you, therefore, the report of the Toll Compensation Committee.

1. Adoption of Independent Toll Traffic Agreement And Associated Implementing Forms

THERE was presented to and approved by the Board of Directors of the National Association at the Spring Conference a proposed Independent Toll Traffic Agreement designed by the Toll Compensation Committee for use throughout the industry.

The Traffic Agreement and associated forms for use in implementing settlements thereunder have been printed and are now stocked by the Association's Washington office and are available to Independent telephone companies, whether members of the Association or not, upon requisition and at cost.

Pursuant to commitments made to the Federal Communications Commission by the American Telephone and Telegraph Company, the new schedules of the Bell System Companies embodying the station-to-station principle were generally made effective as of February 1, 1943. Presumably then the "Indirect" connecting company of the Bell System, that is, an Independent company reaching Bell System lines through the facilities of an intervening Independent telephone company, is entitled likewise to retroactive payment to that date on its Bell business. I doubt, however, that Independent companies kept appropriate records or set aside in a reserve the necessary moneys to meet such a contingent liability, the amount of which was not known or determinable until well along in the year.

Now as to the purely Independent traffic, there is not now and there never was any commitment or obligation to pay the higher compensation provided for in the new recommended standard toll traffic agreement prior to the first day of the billing period next following the date of execution of such a contract.

It would be the recommendation of your committee that as a means of settling the issues where the contracting conecting company delivers to the Independent accounting company both "Indirect" traffic and Independent traffic, proper records be established and maintained beginning as of some date in the future, say November 1, and from the results of the first month's record, or, say three months' record, a compromise be effected by paying the contracting connecting company retroactively to January 1, 1944, on both classes of traffic.. This would keep the settlement in the current year and it would be hoped that the ten months' retroactive settlement on the purely Independent traffic might reasonably offset any deficiency resulting from not carrying the settlement on "Indirect" traffic back into the prior year.

Whatever you do, however, we urge that the larger companies immediately contact their smaller and less prosperous Independent connecting companies and offer this new and higher compensation schedule so that these smaller companies may begin to reap the benefits of the adjusted compensation arrangement. This is just another way in which the small exchange can be helped in securing the revenues which it so desperately needs to enable it to continue to render service to that segment of our economy which is its lot.

2. Policy And Mechanics With Respect To Compensation For Independent Line-Hall Mileage

IT will be recalled that in the settlement of the issues in Docket No. 6468, agreement was reached between the Bell System and the Independents whereby, from and after January 1, 1943, each Independent Company would be allowed two miles of prorate earning for each air line mile of circuit furnished on a Long Lines message only.

Your Committee subsequently recommended that a joint study be undertaken to determine whether or not there is a disparity in the cost of furnishing a mile of toll line as between the Independents and the Associated Bell Telephone Companies on the intra-state traffic the same as was recognized in regard to the Long Lines traffic.

Final settlement of this question entails the compiling of a great amount of technical detail. This, your Committee is now engaged in doing and to date, we have evidence tending to show that there should be a substantial increase in the amount being credited to the average Independent company. The

Committee expects to pursue its studies with all possible dispatch, after which review of the results and further negotiations with representatives of the American Telephone and Telegraph Company are contemplated.

3. Putting the American Telephone and Telegraph Company On Notice That We Desire to be Advised When Interstate Toll Rate Reductions Are Under Consideration

THERE has been some urge to have the Association put the American Telephone and Telegraph Company on notice that we desire to be advised when interstate toll reductions are under consideration. The thought has also been expressed that similar action be taken with respect to the Associated Bell Telephone Companies as regards intra-state toll reductions.

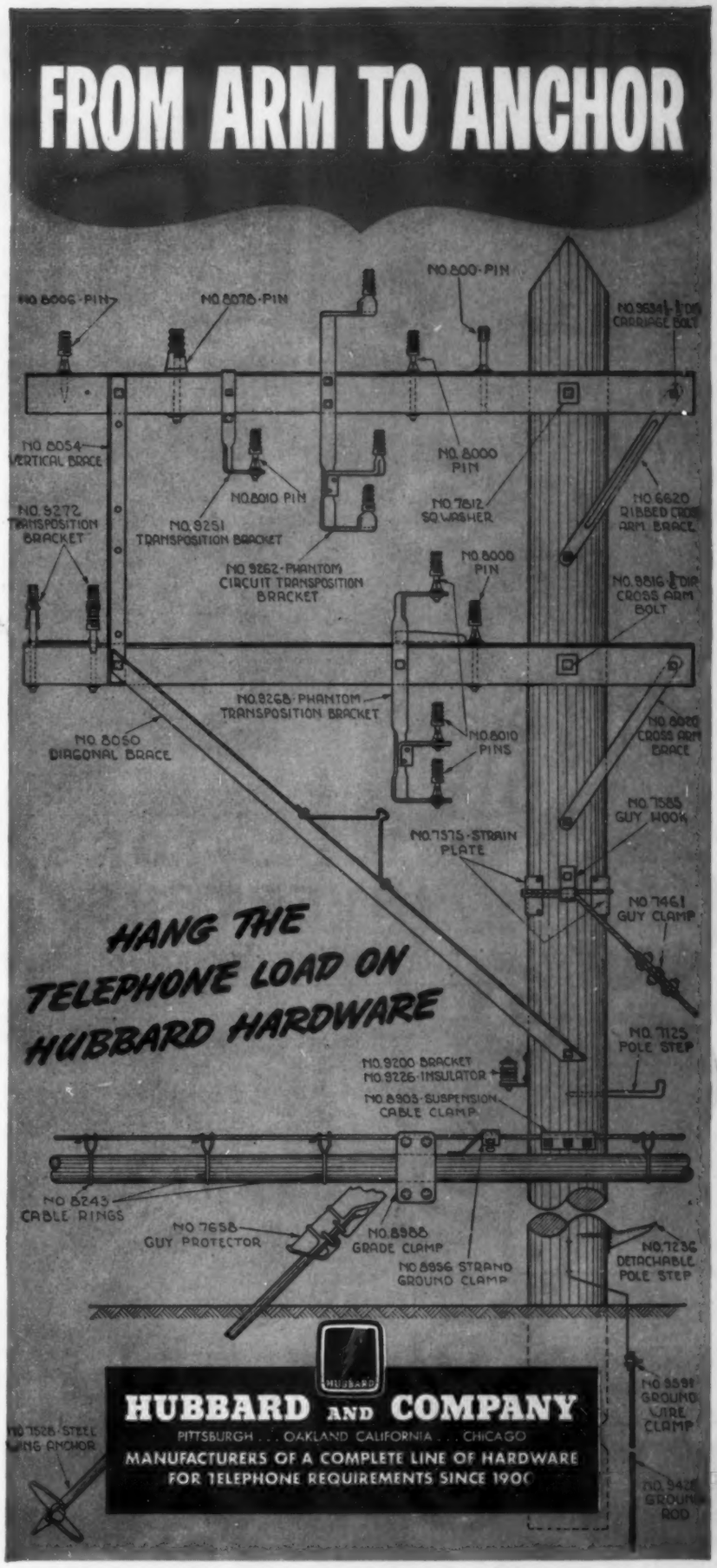
The Independent companies are always concerned in, and their interests are affected by, any reduction in toll rates since lowering of the toll charges not only reduces the average revenue per message of the Independents but it virtually compels the Independents to concur in such reduced rates in order to avoid chaos with respect to the quoting of charges and rating of toll tickets.

It does seem that, in regard to this particular matter, a closer relationship and greater cooperation can be developed in the various states between the Associated Bell Telephone Companies and the State Associations, and between the American Telephone and Telegraph Company and the United States Independent Telephone Association so that we are aware of the rate situation at all times. Efforts along this line are being pursued further by your Committee at this time.

4. Recent Development in the Hotel Surcharge Case

THE Federal Communications Commission is now suing a number of the larger hotels in metropolitan areas seeking to restrain those hotels from collecting from guests a so-called surcharge on interstate toll messages placed from guests' rooms.

It will be recalled that the Associated Bell Telephone Companies have said to us that if an Independent company is required or concludes to pay a commission on interstate and foreign communications placed from guests' rooms of hotels, they would allow that Independent company such commission as an additional compensation before prorate computations, subject, however, to the limitations that no more than 15 percent would be allowed and further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that the 15 percent commission plus the compensation which the exchange now receives for its participation in the toll business does not exceed 100 percent of the revenue derived from such toll business.

We see no need for incorporating this understanding in the toll traffic agreements. We would recommend, however, that for and in consideration of the payment of this commission to hotels, you protect yourself by entering into an agreement with the hotel stipulating that the hotel will not assess a surcharge against the guest making such interstate call. The entire matter is highly confused and until such time as the litigation has been adjudicated, we suggest that you keep your understanding with your connecting Associated Bell Telephone Company in a fluid state.

5. Adequate Compensation For Through Switching Services Rendered to the Bell System by an Independent Company

WE know that wages, taxes, and other costs of rendering the toll business have increased materially in recent years. We have had increases in our toll compensation designed to compensate for those increases. Some of the larger Independent companies perform through switching services for the Bell System and, in general, the rate of compensation for these through switching services has remained fairly constant over a considerable period.

It is presumed that each Associated Bell Telephone Company will want to pay us an adequate compensation for switching services performed. If a Connecting Company is concerned that the switching rates now paid to it may not be fully compensatory, it is recommended that that fact be made known to the particular Associated Bell Telephone Company and that it be requested to make a re-determination of the cost and establish appropriate compensation therefore.

I have said that our report would be brief and pointed. I hope that you will have derived specific benefit from our treatment of the five specific items covered. For your convenience, we have prepared a number of mimeographed copies of the report and they are here on the table for those of you who may wish to obtain one at the close of the session.

END

Named President of Canadian Bell

Frederick Johnson, vice president in charge of accounts and finance of the Bell Telephone Company of Canada since 1935, was appointed president of the company at a meeting of the board at Montreal. He succeeds Charles F. Sise, who will continue as chairman of the board. The changes are effective November 1.

Named Vice President

C. W. Phalen

Clifton W. Phalen was August 9, 1944 appointed vice president (personnel) of the New York Telephone Company, advancing from assistant vice president.

Mr. Phalen entered the telephone business sixteen years ago as a lineman in Syracuse. He became a plant chief for Buffalo and Batavia in 1929. In 1934, he was made district plant superintendent at Kingston and, in 1938, he became division construction superintendent of the Easterrn Division with offices in Albany. The following yearr, he became division plant superintendent.

His appointment as assistant vice president (personnel) was made last November. Mr. Phalen was born in Washington, D. C., and was graduated from Yale in 1928. His home is 42 Central Drive, Plandome, Long Island.

Authorize Sale of Minnesota Company

Ida M. Johnson, owner and operator of the Wastedo Telephone Co., Wastedo, Minn., was authorized on October 2 by the Railroad and Warehouse Commission of Minnesota to sell that company and all of its properties to the Cannon Falls Telephone Co., Cannon Falls, Minn. The order issued by the Commission further provided that the Cannon Falls company may place in effect the rates for rural multi-party service now in effect at their Cannon Falls exchange when the sale and transfer are entirely consumated.

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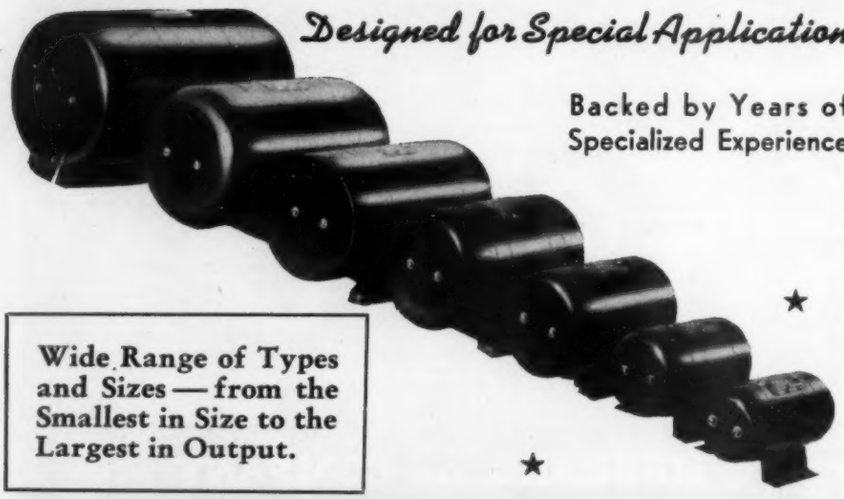

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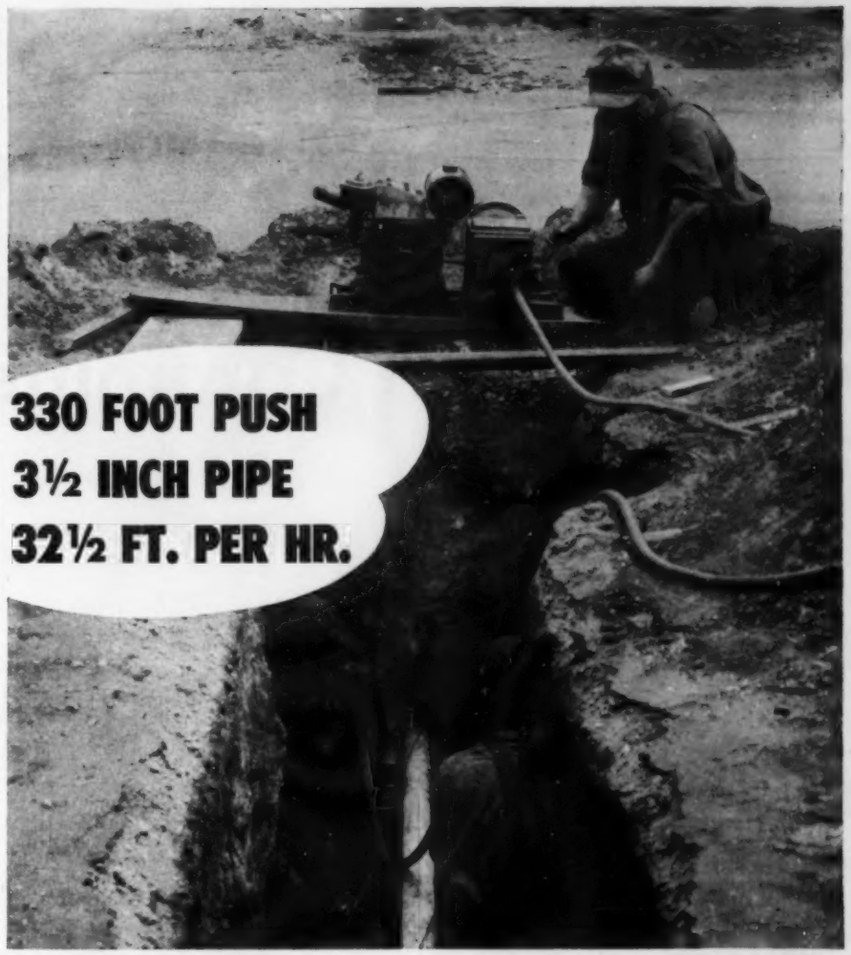
Henry A. Arth Passes

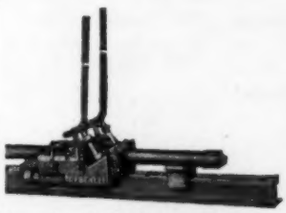
Henry A. Arth

With the untimely death of Henry Albert Arth on October 3, 1944, the Independent telephone industry has lost a true friend and pioneer. Mr. Arth was one of the staunchest supporters of the Independent cause on the West Coast and was widely known for his energy and unselfish willingness to assist the operating companies with their problems.

Born on December 22, 1893 at Oakland, Cal., Henry Arth was educated in California and there centered his entire business activities. In 1912 he joined the sales staff of the Kellogg Switchboard & Supply Co., and for the past 32 years he represented the Kellogg company in various capacities, operating from the company's Pacific Coast Sales Division, in 1930 and in this capacity has had complete charge of the division's sales, service and warehousing operations. In this position telephone folks throughout the territory have come to know and respect Mr. Arth for his willingness to serve the industry.

Mr. Arth was only 51 years old at the time of his death, yet in this short space of time, he put forth his full energy in the interest of the industry and has contributed much to the progress and development of telephone service in the area in which he served. During World War I, Mr. Arth served as a corporal in the Signal Corps of the United States Army. He is survived by his wife, Ann, a son and a daughter.





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ECONOMY—eliminates cost of extensive digging, requires fewer man-hours.

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Use Greenlee Pipe Pushers to install pipe for gas, electricity, water, sewers and telephone cable under concrete pavements and railroad tracks . . . without disrupting normal traffic. Save valuable labor hours and cut costs. Eliminate extensive trenching (just a short trench to accommodate pusher). And there's no tearing up of pavements and lawns, no backfilling, no repaving.

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FOR THE CRAFTSMAN

Carl D. Brorein, Chairman

USITA Telegraph Committee Report

THE Telegraph Committee feels that it is approaching the conclusion of the work for which it was appointed and to which it can properly devote its attention.

The Committee, as previously stated, at no time felt that it was its duty to negotiate contracts, and that it should give its attention to the provision of channels of relationship between the telegraph company and the telephone companies and to general basic contract provisions that could be uniformly applied in order that inequalities in contract provisions and lack of uniformity in relationship practices could be avoided in the interest of a more satisfactory public service.

The actual contract negotiation, acceptance, modification or rejection of the proposed terms, we considered to be a matter between the contracting parties; i.e., the Western Union Telegraph Company and the particular telephone company involved.

Conditions affecting the particular situation would in no small measure quite naturally enter into the particular contract, and would be worked out by negotation between the telegraph and the telephone company, even to the extent of perhaps requiring modification in some instances where mutually agreed upon as the general basic principles arrived at in the negotiations of this Committee. In other words, this Committee feels that it has performed its service in the development of uniform channels of negotiation between the telephone companies and the telegraph company, in the provision of a point of contact during this period between the telephone industry through the Association and the telegraph industry, and in securing an understanding and agreement of basic contract provisions affecting liability, minimum compensation, training of personnel and other matters of general application of this nature.

Since last Spring, at which time a meeting of the Committee was held with representatives of the Western Union Company, there have been exchanged by correspondence and personal contact the views of our Committee members and others of the operating industry with Western Union. These exchanges of views resulted in the submission by Western Union of a first draft of proposed contract forms during the past Summer.

At a meeting yesterday afternoon, (October 11) these contract drafts were reviewed by the Committee and other members of the industry interested in this service, and to all intents and purposes the form and provisions of the contracts have been agreed to in the major part, to be at least recommended to the telephone industry by the Committee.

The Committee has been instrumental, with the assistance of many interested companies, in working out the following program with Western Union.

First, the establishment of a representative in the general offices of the company through which the relationships between the telephone companies and the telegraph company throughout the country would be unified and centralized.

Second, the development of general contract provisions which can be uniform in application. The Committee feels, and the Western Union representatives agree, that contracts covering agency arrangements and covering billing and collecting service should be separate, and contract forms have been submitted on this basis. I had hoped to have these forms available for presentation to the Association today, but because of changes made at yesterday's meeting which must be cleared through the telegraph company's general offices, these contract forms cannot be submitted today but will be at the earliest possible date. Upon inquiry, if you are interested, the Association's offices will submit these forms to you as soon as they are available.

The important general provisions of these contracts are as follows:

(1) Agency agreement liability is definitely limited to errors for which the telephone company is responsible. Suits involving other matters will be defended by the telegraph company.

(2) Territorial rights by reason of contracts now in existence cannot be guaranteed at this time in the present contracts. The propriety of guarantee, however, is recognized and will be covered by a letter of policy to the Association from the proper Western Union official.

(3) Protection against withdrawal of contracts after development of profitable business will also be provided in a letter of policy from the Telegraph Company to the Association.

(4) Minimum compensation is provided in each contract, being 45% plus line mileage in the agency proposal and 10% in collection proposal. These amounts may be adjusted upward by reason of local conditions if warranted.

(5) Certain other mutual obligations are entered into, including employee

training, use of advertising facilities. etc., which I will not undertake to review here, but which are considered practical and of mutual advantage by companies operating under these arrangements.

It might be added in conclusion that the matter of teletypewriter service and the sale of certain facilities by the Western Union acquired from the Postal Company have been before the Committee, but it has not yet been possible to make a determination of these particular matters. I believe the sale of certain facilities referred to above has progressed to the point where prints of some available property can be secured through the Association by those telephone companies who may be interested by reason of the rendition of services in the area affected.

We take this opportunity to express to Mr. Hitchen and the Western Union representatives assigned by the general offices to this work, our appreciation of the cooperative manner in which they have approached our work and the consideration which they have given our proposals. They have gone to the field and worked with the companies who are most affected at the present time by these contracts. In this manner they have secured a practical understanding of the problems involved.

It has also been most gratifying that all the companies in the field have worked in cooperation with the Telegraph Committee, and the job of the Committee could not have been accomplished in the manner it has without the assistance and the cooperation that has been given us by the operating companies. This job has been an outstanding example of open minded consideration on a business basis of mutual relationships in the interest of public service.

Respectfully submitted,
TELEGRAPH COMMITTEE
Mr. J. H. Agee
Mr. O. Burton
Mr. D. O. Hood
Mr. Geo. Quatman
Mr. V. E. Chaney
Mr. H.V. Bozell
Mr. C. D. Brorein, Chairman

Postwar Rural Electrification

Senator Lucas (D., Ill.) has introduced a bill, S. 2029, directing the Rural Electrification Administration to prepare immediately "comprehensive plans and programs for the electrification of rural areas to the fullest extent possible" as soon as materials and manpower are available. The bill would appropriate $5,000,000 to defray the cost of preparation of plans.

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Washington News

(Continued from page 66)

gaged in private consulting engineering practice, and Clyde S. Bailey, executive vice president for the USITA. On behalf of Theodore Gary & Co., the witnesses on this subject are to be V. E. Chaney, president of the Telephone Bond and Share Co., Rear Admiral S. C. Hooper, USN retired, and Colonel William R. Blair, USA retired, who are consultants of the Automatic Electric Co.

The principal potential uses of radio channels in the Independent field are felt to be for short and long haul telephone toll trunks, for special rural telephones and to a certain extent for radio telephone mobile service.

Radio channels, it is to be stressed at the FCC hearings, would be particularly useful in providing more adequate toll service to communities which are difficult to serve with wire lines. The Mutual Telephone Company of Hawaii has particularly demonstrated the usefulness of radio telephone service in the ultra-high and VHF portions of the spectrum. The extent to which radio channels could be used for toll links would depend on the cost of the required radio equipment.

There is a real need for low cost radio units, it is understood, which would permit the extension of rural telephone service to many families now living so far from existing wire lines as to make it uneconomic to serve them by extension of wire lines. Many farmers, ranchers, miners, etc., who need telephone service badly, could be served with radio links. The distances involved seldom exceed 25 miles and are often less than 10 miles. But the practicability of serving these potential users by wire lines is often not feasible and, out of the war developments, it is felt that low cost radio telephone subscriber terminal units can be developed and produced.

Toeppen Resigns Post With FCC

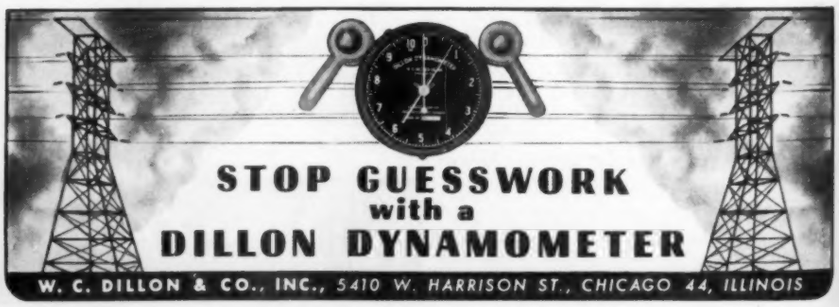
Manfred K. Toeppen, assistant chief engineer of the FCC in charge of the Common Carrier Division, is resigning Nov. 1 to enter private engineering consulting practice with offices in New York. His successor in an acting capacity is to be Edward Hale, who has been assistant chief of the Division.

Mr. Toeppen has been assistant chief engineer since April 28, 1943. In his new field he will engage in engineering consultation for both the communications industry and the power and gas fields.

Manfred K. Toeppen

A graduate of the Washington University of St. Louis in electrical engineering and of American University in economics, Mr. Toeppen spent many years in the utility field, principally in the telephone industry (the old Central Union and Chicago Telephone Cos.) from 1908-20.

From 1924-30 he was chief engineer of the Michigan Commission. Then for the next ten years he was in consulting engineering practice in Detroit and handled important telephone and power rate cases for the Michigan and New York Commissions. He joined the FCC Telephone Investigation staff in 1935 and remained with the Commission's regular engineering staff ever since that time.



C. E. Brown

Kellogg Switchboard Announces Organization Change

F. M. Parsons, sales manager of Kellogg Switchboard & Supply Company, announced the appointment of C. E. Brown as manager, Supply Sales Department, the appointment becoming effective September 25.

Mr. Brown is well qualified for his new position as he has been associated with the Kellogg Company in various capacities for over 25 years.

Mr. Brown served overseas in World War One as a member of the Tank Corps in the United States Army, and upon his discharge he joined the Kellogg organization serving in the order department of the Kansas City office, then headed by H. M. Faris.

In 1928 Mr. Brown was transferred to Columbus, Ohio, as office manager of the Kellogg Branch. in 1929 he was appointed acting district manager of the Kellogg Branch at San Francisco, replacing H. A. Arth who had taken a temporary leave of absence. Upon the return of Mr. Arth to active duty, Mr. Brown was transferred back to Columbus and appointed field representative, traveling the eastern half of Ohio. This territory was later expanded to include western Pennsylvania, the western part of West Virginia and a part of New York State.

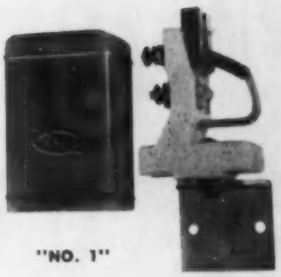
In 1937 Mr. Brown was made district manager for all of Ohio, West Virginia and western New York State, which position he held until his appointment as manager of the Supply Sales Department.

Hughes Concludes War Department Service

William A. Hughes, who has been serving as Director of the Industrial Personnel Division of the Army Service Forces since last April, ended that war service Sept. 9 and returned to his former post as vice-president and general manager of the Indiana Bell Telephone Co. His successor will be Col. Ralph Gow.

Mr. Hughes has performed notable service with the Army Service Forces in the ironing out of industrial personnel problems to keep war production at full speed. This work necessitated frequent discussions and conferences with the procurement leadership of the armed forces, the top officials of the government agencies handling manpower and labor matters and the leading officials of the labor unions.

During his service at the War Department Mr. Hughes represented Under Secretary of War Patterson on the War Manpower Commission, headed by Paul V. McNutt. He was also the War Department member on the Council for Personnel Administration and was a member of the joint Army-Navy Personnel Board, headed by Admiral Jacobs and General Henry; of the Army-Navy Maritime Commission Ship Building Wage Stabilization Board; the Secretary of War's Personnel Committee and the Review Committee of the War Department in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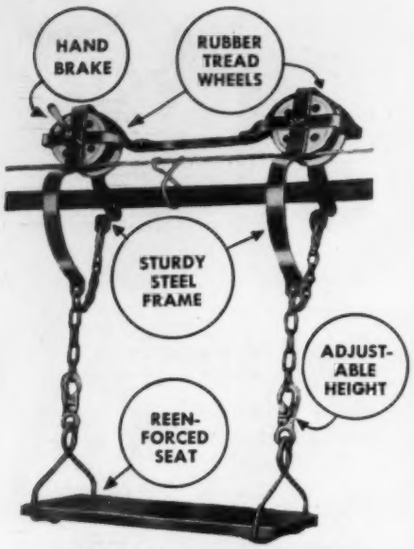

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connection with contract cutbacks. His work engaged him in frequent conferences with the leading officials of the Department of Labor and the National War Labor Board.

M. J. Kelly

Named Executive V. P. By Bell Laboratories

DR. Mervin J. Kelly, director of research of Bell Telephone Laboratories, has been elected executive vice president of the Laboratories. A scientist of distinction, Dr. Kelly has made substantial contributions to photo-electric cells for sound-pictures; to the water-cooled tubes widely used for high-power broadcasting, and to the vacuum tubes which make long distance telephony possible. He graduated from the University of Missouri in 1914 and received the Ph. D. from Chicago in 1918. In that year he entered the Laboratories as a research physicist. He became vacuum-tube development director in 1930 and director of research in 1936. Dr. Kelly has had charge of Bell Laboratories development in radar and other important fields. He is an advisor to the government on technical war projects; a Fellow of American Institute of Physics, American Institute of Electrical Engineers, Institute of Radio Engineers, Accoustical Society of America, and a member of the Directors of Industrial Research.

Alva B. Clark and Dr. Reginald L. Jones have been elected vice presidents of the Laboratories.

Yanks In Signal Corps Astound Allies

Government telephone workers in Great Britain were goggle-eyed over accomplishments of U. S. Army Signal Corps crews which employed American telephone construction methods in providing communications urgently needed by American forces there.

The Signal Corps came into the picture when the British general post office, which operates the government-owned telephone system, was unable to provide enough manpower for the work.

A British five-man team, digging holes and erecting poles by hand, could set only four poles a day. But five Americans, with a truck and boring equipment, set 62 poles in a day.

In overhead cable construction, a number of time-consuming splices were avoided through the use of 2,500-foot lengths of cable instead of the 750-foot sections used by the British. Truck winches enabled the Yanks to place the cable at the rate of five to 10 miles per hour as compared with two miles hourly by the British method.

Other mechanical equipment and methods permitted the Americans to lay nine sections of underground cable daily while the government workers were placing three.

Third Army-Navy "E" Award Goes to Copperweld Steel Company

The men and women of the Glassport, Pa., plant of the Copperweld Steel Company have won the Army-Navy "E" for the third time, the company has been informed by Under Secretary of War Robert P. Patterson. The award has been given for high achievement in the production of Copperweld wire for war purposes.

Winning this award gives the Copperweld company the right to add a second star to the "E" flag which now flies over the Glassport plant. Close cooperation between Labor and Management—plus the most efficient use of operating equipment and intensive training of new personnel—are responsible for the outstanding achievements which won the third award, according to William J. McIlvane, executive vice President of the company.

Jasper Blackburn Dies

Jasper Blackburn, president of Jasper Blackburn Products Corp., St. Louis, Mo., and vice president of the Everstick Anchor Co., Fairfield, Iowa, died at Webster Groves, Mo., on August 31, the 75th anniversary of his birthday. Mr. Blackburn, born at Hunnewell, Mo., spent forty years in the manufacture of telephone and electric utility items, and in addition to his business activities was interested in

flowers, not only the beautiful flower garden at his home, but also the parks of his native Missouri.

Mrs. Margaret M. Blackburn, his wife; two daughters and three grandchildren survive Mr. Blackburn.

John M. Stahr Passes

John M. Stahr, comptroller of manufacture of the Western Electric Company died suddenly recently while on vacation at Lake Minnewaska, New York.

Born in Voldum, Denmark, in 1884, Mr. Stahr came to the United States as a child and after attending public schools entered Rutgers University from which he graduated in 1906 with an A. B. degree and was elected to Phi Betta Kappa. Shortly after graduation, he joined the Western Electric Company where he spent his entire business career, with the exception of a period during the first World War when he served as a civilian employee with the Signal Corps, in charge of expense distribution in connection with aircraft contracts.

Statement of the Ownership, Management, Circulation, Etc., Required by the Act of Congress of March 3, 1933,

of Telephone Engineer and Management, published monthly at Pontiac, Illinois, for October 1, 1944.

State of Illinois, County of Cook, ss.—Before me, a notary public in and for the State and county aforesaid, personally appeared Ray W. Smith, who, having been duly sworn according to law, deposes and says that he is the editor of the Telephone Engineer and Management, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc. of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher—Telephone Engineer Publishing Corp., 7720 Sheridan Road, Chicago, Illinois.

Editor—Ray W. Smith, 7720 Sheridan Road, Chicago, Illinois.

Business Managers—Ray W. Smith & Roy F. Smith, 7720 Sheridan Road, Chicago, Illinois.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address as well as those of each individual member must be given.)

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3. That the known bondholders, mortgagees, and other security holders owning or holding one per cent or more of total amount of bonds, mortgages or other securities are: (If there are none, so state.)

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4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

RAY W. SMITH,
Editor.

Sworn to and subscribed before me this 1st day of October, 1944.

(My commission expires Sept. 1, 1947).

(Seal) W. P. DAVIS,
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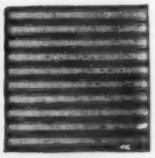

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